STATEMENT

OF

WORK(SOW)

INSPECT AND REPAIR ONLY AS NECESSARY (IROAN) FOR SELF-PROPELLED VACUUM CLEANER

(RUNWAY SWEEPER)

NSN 3825-01-136-2920

EFFECTIVE DATE: 01 October 2000

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STATEMENT OF WORK FOR THE SELF-PROPELLED VACUUM CLEANER NSN 3825-01-136-2920 TYMCO MODEL 600

1.0 . **SCOPE.** This Statement of Work (SOW) establishes and sets forth tasks and identifies the work efforts that shall be performed by the Contractor. This document contains the minimum requirements to assemble, integrate, make fully operational, calibrate, install, test and inspect the Self-Propelled Vacuum Cleaner, NSN 3825-01-136-2920, Weapon System Code NA, to a serviceable condition (Condition Code "A"). Condition Code A is defined as Serviceable/Issuable without qualification, new, used, repaired or reconditioned material which is serviceable and issuable to all customers without limitation or restriction. Includes material with more than six months shelf-life remaining. The National Stock Number (NSN) listed here shall be known as the Runway Sweeper 3825-01-136-2920. This SOW along with the Runway Sweeper Technical Manuals covers the minimum requirements applicable to the restoration of the Runway Sweeper.

Additionally, The Runway Sweeper Technical Manuals sets forth guidelines within which the Runway Sweeper shall be refurbished, repaired and restored. The basic configuration of the Runway Sweeper is established by the Runway Sweeper Technical Manuals that are currently in the Marine Corps inventory. All materiel (including repair parts) shall be provided by the Contractor. Installation and testing shall be performed by the Contractor. All special tools and test equipment required to perform any task on the Runway Sweeper are listed in the Runway Sweeper Technical Manuals, and shall be provided by the Contractor.

Questions related to this SOW should be addressed to the Runway Sweeper Weapon System Manager, Life Cycle Management Center, Code 837-2, MARCORLOGBASES, Albany Ga. Commercial Phone (912) 439-6533 or DSN 567-6533.

1.1 **BACKGROUND.** IROAN is defined as :The maintenance technique which determines the minimum repairs necessary to restore equipment components or assemblies to prescribed maintenance serviceability standards by utilizing all available diagnostic equipment and test procedures in order to minimize disassembly and parts replacement.

1.2 **ITEM IDENTIFICATION**. The Runway Sweeper is an end item that is made up of three different subassemblies. These subassemblies are:

a. Sweeper Assembly. This assembly contian the Hopper Assembly, Blower Assembly, Pickup Head Assembly, Gutter Broom Assembly, and the Water and Hydraulic systems with their controls.

b. Sweeper Power Unit, John Deere Engine-4239 DL. This assembly powers the sweeper assembly.

c. Truck, S-1654, IH-Navistar. This assembly is the Runway Sweeper prime mover.

2.0 **APPLICABLE DOCUMENTS.** The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirements.

2.1 **SPECIFICATIONS AND STANDARDS.** Specifications and Standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation.

MIL-STD-129	Marking for Shipment and Storage
MIL-STD-130	U.S. Military Property, Identification Marking of

Military Standards-Guidance Only

MIL-STD-973	Configuration Management

2.2 **OTHER GOVRNMENT DOCUMENTS AND PUBLICATIONS**. The issues of those documents cited below shall be used.

ATPD 2241	Vehicle, Wheeled: Preparation for Shipment and Storage of
DoD 4000.25-1-M	MILSTRIP Manual
NAVICPINS 4491.2A	Requisitioning of Contractor Furnished Material From The Federal Supply System
TM-4750-15/2-1	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment.
TM-3825-12/1	John Deere Engine Works OM-RG16407
TM-3825-12/2	Navistar Operation Manual #1087461-R1-1E
TM-3825-12/3	TYMCO Model 600
TM-3825-24/4	Allison Transmission AT540 #SA-1241N
TM-3825- 24/5 Vol 1	Truck CTS-4239 8300 S-Series
TM -3825-24/6 Vol 2	Truck CTS-4239 8300 S-Series
TM-3825-24&P/7	TYMCO Model 600

TM-3825-24&P/7	USMC Supplement 1, Service and Parts Manual
TM-3825-24&P7	Erratum
TM-3825-24P/8	International PC-900T/87
TM-3825-24P/9	Engine & Accessories 4239D & 4239T
TM-3825-24P/10	Allison Transmission AT540, #SA 1235V

2.3 **INDUSTRY STANDARDS**.

ANSI/ISO/ASQC Q9002-1994 Qualilty Systems-Model for Quality Assurance in Production, Installation and Servicing.

Copies of Military Standards and Specifications are available from the DOD Single Stock Point, Defense Automation Production Service Philadelphia, Building 4D, 700 Robbings Ave, Philadelphia, PA 19111-5094, Telephone (215) 697-2179 or DSN 442-2179, or http://www.dodssp.daps.mil. Copies of other government documents and publications required by contractors in connection with specific SOW requirements shall be obtained through the Contracting Officer: Commander, Attn: Contracting Officer (Code 891) Marine Corps Logistics Bases, 814 Radford Blvd., Albany, Georgia 31704-1128, commercial telephone number (912) 439-6761 or DSN 567- 6761. Copies of engineering drawings, if applicable, shall be obtained from Life Cycle Management Center, Attn: Code 825-3, 814 Radford Blvd. Suite 20320, Albany, Georgia 31704-0320, commercial telephone number (912) 439-6410 or DSN 567-6410.

3.0 **REQUIREMENTS.**

3.1 **GENERAL TASKS** In fulfilling the specified requirements, the Contractor shall render, yet shall not be limited to the following tasks:

a. Provide materials, labor, facilities, repair parts and services necessary to troubleshoot, test, diagnose, engineer, integrate, install, repair and calibrate as required to make fully operational, the Runway Sweeper.

b. Conduct final-on-site testing for witness by the Weapon System Manager and/or their Representatives.

c. The Contractor shall be responsible for all structural, electrical and mechanical requirements associated with the repair and restoration of the Runway Sweeper.

3.2 **IROAN OBJECTIVE AND FUNCTIONS** After IROAN, the Runway Sweeper shall have as a minimum the following characteristics:

a. Reliable as per system specifications. System specifications for the Runway Sweeper can be found throughout the Technical Manual list below. Specifications are not always express in numbers but in some cases, specifications are expressed as an inspection. Specifications are

listed with each assembly/subassemblies remove, inspect, and repair procedures in the Technical Manual that addresses the component being repaired or IROANed.

TM-3825-12/1	
TM-3825-12/2	
TM-3825-12/3	
TM-3825-24/4	
TM-3825- 24/5 Vol 1	
TM -3825-24/6 Vol 2	
TM-3825-24&P/7	TYMCO Mode 600
TM-3825-24&P/7	USMC Supplement 1,
TM-3825-24&P7	Erratum, USMC Supplement 1, Service and Parts Manual
TM-3825-24P/8	
TM-3825-24P/9	
TM-3825-24P/10	

b. Maintainable

c. Serviceable (Condition Code "A")

d. Latest Marine Corps Configuration

e. All Runway Sweeper systems and components shall operate as designed intended.

3.3 **SPECIFIC TASKS** The following tasks describe the different phases for IROAN of the Runway Sweeper.

Phase I	Pre-Induction (Initial Inspection)
Phase II	IROAN
Phase III	Inspection, Testing and Acceptance
Phase IV	Packaging, Handling, Storage and Transportation (PHS&T)

3.3.1. **PHASE I PRE-INDUCTION**

a. The Contractor shall inspect in detail Runway Sweepers transported to the Contractor for rebuild under provisions of this SOW. The Contractor shall ensure that the inspection is sufficient to determine the condition of the inspected Runway Sweeper and the extent of work and repair parts required. The findings of this inspection shall be annotated on the Runway Sweeper Pre-Induction Checklist (Appendix A of this IROAN SOW) and shall be maintained and made available upon request by the Weapon System Manager and/or their Representatives. The Runway Sweeper Initial Inspection Check List may be duplicated in a electronic data base and maintained in that data base. If data is selected to be provided electronically to the Weapon System Manager and/or their Representatives, the Data base program must be agreed to by both the Contractor and the Weapon System Manager and/or their representative

b. Test equipment shall be used to determine that assemblies and subassemblies meet prescribed reliability, performance, and work requirements. In those cases when conformance to the

SOW cannot be certified through existing inspection and testing procedures and by use of diagnostic equipment, the assembly shall be removed, disassembled, inspected, tested and repaired to the degree necessary to assure full conformance with this SOW. Runway Sweeper will be operational tested 100 per cent in accordance with this SOW.

c. Oil seals and gaskets leakage. Evidence of lubricating or hydraulic oils passing through or around a seal is in itself not a defect; however, consideration must be given to the fluid capacity in the item being checked/inspected. Inspection shall normally be performed during and immediately following an operational test, but not sufficient duration to allow the fluids to return to ambient temperatures. The following shall be used as a guide in determine degree of oil loss:

(1) Class I - Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.

(2) Class II - Leakage of fluid great enough to form drops, but not enough to cause drops to fall from the item being checked/inspected.

(3) Class III - Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

NOTE

A CLASS I OR II LEAK, EXCEPT FUEL SYSTEM, BRAKE SYSTEM, AND POWER STEERING SYSTEMS IS AN ACCEPTABLE CONDITION AT ANY TIME AND DOES NOT REQUIRE CORRECTIVE ACTION.

3.3.2 **PHASE II - IROAN.** After pre-induction tests and inspections have been completed, repair of the Runway Sweeper shall be accomplished in accordance with this SOW and the Runway Sweeper Technical Manuals listed in paragraph 3.2.a. Deficiencies noted on the Runway Sweep Pre-induction checklist during Phase I shall be repair/replaced.

The following efforts shall be performed as part of the IROAN:

The Service and Parts Manuals listed below contains repair procedures and repair parts for the complete Runway Sweeper. The Trouble Shooting Guide contained in these manuals are to be used along with the Pre-induction checklist (Appendix A) in helping identify deficiencies with the Runway Sweeper. Repair procedures contained in these manuals are to be used to repair deficiencies identified on the Pre-induction checklist (Appendix A).

TM-4750-15/2-1	Painting and Registration Marking for Marine Corps Combat and Tactical Equipment.
TM-3825-12/1	John Deere Engine Works OM-RG16407
TM-3825-12/2	Navistar Operation Manual #1087461-R1-1E
TM-3825-12/3	TYMCO Model 600
TM-3825-24/4	Allison Transmission AT540 #SA-1241N

TM-3825- 24/5 Vol 1	Truck CTS-4239 8300 S-Series
TM -3825-24-6 Vol 2	Truck CTS-4239 8300 S-Series
TM-3825-24&P/7	TYMCO Model 600
TM-3825-24&P/7	USMC Supplement 1, Service and Parts Manual
TM-3825-24&P7	Erratum, USMC Supplement 1, Service and Parts Manual
TM-3825-24P/8	International PC-900T/87
TM-3825-24P/9	Engine & Accessories 4239D & 4239T
TM-3825-24&P/10	Allison Transmission AT540, #SA 1235V

The Service and Parts Manuals listed may contain provision for corrosion control, painting, and packaging. Provisions for corrosion control, painting. and packaging is provided within this SOW and shall be the superseding requirement.

a. **DETAILED MECHANICAL REWORK:** Runway Sweepers received for IROAN shall be reworked in accordance with the following paragraphs. All discrepancies noted on the IROAN Pre-Induction Checklist shall be repaired/replaced.

b. **HARDWARE**

(1) Replace broken, unserviceable and/or missing hardware, including nuts, bolts, screws, washers, turnlock fasteners, safety, and one time use items, etc., in accordance with the IROAN. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

(4) Hardware used in this IROAN shall be in accordance with existing technical publications.

c. **Truck (501718), International S-1654**. The purpose of the truck is to serve as the prime mover for the sweeper and its accessories. Refer to the truck operator and maintenance manuals for trouble shooting and repair procedures. These Manuals are TM- 3825-12/2, TM-3825-24/4, TM-3825-24/5 Vol 1, TM-3825-24/6 VOL 2 , TM-3825-24P/8, and TM-3825-24P/10. TYMCO Model 600 Truck Assembly Parts List is found in Section A, page A-2 of TM-3825-24&P/7. The truck shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A)

(1) Engine Assembly, 7.3 Liter

a. TEST PROCEDURES. Prior to initial inspection, always make visual checks to assure normal operating conditions exist (fluid levels are correct, belt tension, etc.). Engine will not be removed from the Runway Sweeper unless major defects are found during the initial inspection, oil analysis and road testing. If repair is required, remove and repair per technical references in TM-3825-24/5 Vol 1 and TM-3825-24/6 Vol 2. Each engine assembly will be IROANed of all reported deficiencies. The engine will be detail cleaned and inspected for loose, damaged, or missing parts. Special emphasis will be in place on mechanical noises which may identify internal engine damage. No unusual vibrations, excessive oil consumption, excessive exhaust smoke, leakage of exhaust gases, exhaust restrictions, loss of coolant, low engine oil pressure or engine overheating are permitted. Engine shall be tested using the Engine Diagnostic Test Procedures For 7.3 Liter Diesel Engines. These test procedures can be found in the 7.3 Liter Diesel Engine Diagnostic Manual, Engine Diagnostic Test Procedures (Section 5) contained in TM-3825-24/6 Vol 2.

If engine repair/rebuild is required, remove and repair per technical references shown in TM-3825-24/5 Vol 1 and TM-3825-24/6 Vol 2.

b. Pass/Fail. The engine shall be complete and contain no loose, damaged, or missing parts. Repaired/Rebuilt engines shall be in compliance with the 7.3 Liter Diesel Engine Diagnostic Manual, Performance Data Guidelines (Section 5) and other Sections of TM-3825-24/5 Vol 1 and TM-3825-24/6 Vol 2 that contain repair/rebuild procedures and for the 7.3 Liter Diesel Engine and its components and assemblies.

(2) FUEL SYSTEM

a. TEST PROCEDURES Test the following in accordance with TM-3825-24/5 Vol 1 and TM-3825-24/6 Vol 2 to conform with inspection and testing procedures to assure full conformance with this SOW.

(1) Inspect the fuel supply pump assembly for loose or broken items, cracks, and leaking gaskets.

(2) Inspect the air cleaner indicator for proper function.

(3) Inspect fuel lines for rust, leakage, tight and secured fittings..

(4) Inspect both the left and right side accelerator pedals, linkage and cables for binding and proper function.

(5) Inspect air cleaner assembly for corrosion, damage, and leaking.

(6) Replace all fuel, and oil filters 100 percent.

(7) Inspect chassis mounted water separator/primary fuel filter to assure it is securely mounted with no missing hardware. Inspect filter assembly for leaks, corrosion, loose fittings, and

damage. Inspect all metallic and non metallic hose assemblies for corrosion, kicks, frayed hoses, and flatten areas that may hinder fuel flow or operation of water separator/primary fuel filter.

(8) Inspect the engine air intake hose for cracks, foreign material, missing hardware, and proper fit. Check the two side scrubbers to assure proper fit and cleanness.

B. PASS/FAIL.

(1) Fuel system contains no leaks of any type.

(2) The fuel pump, filters and fuel lines, both metallic and nonmetallic, are securely mounted in their proper places with no missing mounting hardware. Replace metallic fuel lines that contain flat spots or kicks that may restrict fuel flow or eventually result in leakage. Stripped or rounded off fitting are not permitted. Replace nonmetallic fuel lines that contain blisters or deformations to the outer covering. No excessive abrasion or scrubbing areas on outer surface of both the nonmetallic and metallic hoses and lines are present. All fuel lines and hose mounting hardware (nuts, bolts, washers, clamps, etc.) are securely inplace and none of these items are missing. All fuel filters have been replaced 100 percent.

(3) Replace air indicator if not functioning properly. Replace air filter housing if damaged. Replace air filters 100 percent.

(4) Replace cracked or broken air inlet hoses. Replace scrubbers if cracked or broken. Scrubbers shall be clean and free of foreign material. Replace hose clamps that will not maintain tightness or are stripped out.

(5) Repair/Replace throttle linkage if binding. Replace all broken or bent accelerator pedals. Replace all broken or distorted springs. Both the left and right accelerator pedal assemblies shall provide equal engine speed control. Replace accelerator control cable if binding or outer cover is damaged.

(6) Repair/Replace water separator/primary fuel filter if damaged or leaking. Water separtor/primary fuel filter shall be securely mounted in its proper place with no missing mounting hardware. Replace metallic fuel lines that contains flat spots or kinks that may restrict fuel flow or eventually result in leakage. Replace metallic fuel lines that contains stripped or rounded off fittings. Replace nonmetallic fuel lines that contains blisters or deformities to the outer covering. Replace all hoses and lines that contains excessive abrasion or scrubbing areas on the outer surface of the lines or hoses. All fuel lines and hose mounting hardware (nuts, bolts, washers, clamps, etc.). are securely inplace and none of these items are missing. All fuel filter have been replaced 100 percent.

(3) COOLING SYSTEM.

a. TEST PROCEDURES.

(1) Inspect hose clamps for tightness.

(2) Inspect deaeration tank and cap for leaks. Inspect tank mounting hardware for damaged and missing parts.

(3) Inspect water inlet manifold for leaks.

(4) Inspect thermostat housing for leaks.

(5) Inspect fan assembly for breaks, bends, and missing rivets. Inspect fan assembly for missing bolts and washers.

(6) Inspect water pump for leaks, cracks, and unusual noise.

(7) Inspect fan clutch for unusual noise and missing bolts, washers, and nuts.

(8) Inspect fan shroud for breaks or cracks. Inspect fan shroud for missing mounting hardware (nuts, bolts, washers, and brackets).

b. PASS/FAIL

(1) Replace any hose clamp that shall not remain tight or can not be tighten.

(2) Replace gasket on water inlet manifold if leaking. If manifold is corroded to the extent that the manifold leaks even with a new gasket, replace manifold.

(3) Replace deaeration tank and cap if leaking. Replace all missing or damaged mounting brackets, nuts, bolts, and washers.

(4) Replace thermostat and thermostat housing gasket 100 percent. Replace all cracked and badly corroded housings.

(5) Replace fan assembly if broken or bent. Replace fan assembly if blades are missing rivets. Replace all missing nuts, bolts, and washers.

(6) Replace fan clutch if unusual noises are detected. Replace all missing nuts, bolts, and washer.

(7) Replace fan shroud if broken or shroud contains crack that, in the Contractor opinion, weakens the shroud to an extent that it may fail. Replace all missing or damaged mounting brackets, nuts, bolt, and washers.

(8) Replace water pump gasket if leaking. Replace water pump if leaks.

(9) Reverse flush, clean, and inspect radiator core 100 percent. Straighten bent fins that can be straightened. Test radiator for pressuration. Radiator shall hold 15 PSI for three minutes without evidence of leakage or structural failure.

(10) Replace coolant. Antifreeze protection shall be to a temperature of -20 degrees Fahrenheit.

Procedures for repair/replacement can be found in TM-3825-24/5 and TM-3825-24/6 VOL 2.

(4) ELECTRICAL SYSTEM All Runway Sweepers for IROAN shall have batteries installed.

a. TEST PROCEDURES Inspect all wiring harness, battery cables, NATO slave receptacle, and for ripped or torn insulation and tie wraps.

(1) Test the alternator and starter motor as per test procedures in TM-3825-24/5 VOL

(2) Inspect instrument panel gauges for proper operation.

(3) Inspect headlights, turn signals, side marker lights, reflectors, work lights, instrument panel lights, and interior cab lights for corrosion, moisture, broken/blown bulbs, damaged and non operational light fixtures (assemblies).

(4) Inspect instrument sending units, transmission neutral start switch, horn switch, horn, horn button, heater blower motor switch, turn signal switch, head light switch, dimmer switch, circuit breakers/fuses, heater blower motor, stop light switch, wiper motor switch, windshield washer switch, back up alarm/switch, and ignition switch for proper operation.

b. PASS/FAIL. Repair of insulation less than four inches in length may be accomplished by using electrical tape. Corrosion shall be removed from components. Upon removal of corrosion, if component does not function property, replace component. Replace all damaged battery cables and NATO slave receptacle. Replace any missing or damaged wire ties and wraps.

(1) Repair/Replace alternator and starter motor that does not pass test identified in TM-3825-24/5. Install new hot batteries for Runway Sweeper identified for immediate shipment and new dry batteries for Runway Sweepers identified for storage.

(2) Replace any gauge or switch that does not function property. Replace gauges only after assurance that gauge sending unit is not defective. Replace gauges if gauge can not be easily read.

(3) Replace broken headlights, turn signal lights/lenses, side marker lights/lenses, reflectors, work lights, strobe light, and interior cab lights/lenes. Replace blown bulbs in the instrument panel and lighting system. Replace any light assembly found missing during the pre-induction inspection of the Runway Sweeper. Replace Runway Sweeper backup alarm/switch if defective.

(5) TRANSMISSION: Transmissions will not be removed from the Runway Sweeper unless major defects are found during the initial inspection, oil analysis and road testing. If repair is required, remove and repair per technical references in TM-3825-24P/10.

a. TEST PROCEDURES, TRANSMISSION IN VEHICLE. Assure transmission is at normal operation temperature and transmission fluid is at correct level before testing. Test is to include driving the Runway Sweeper in forward and reverse gears to check proper operation of the transmission. During the road pre-induction test, the transmission shall be inspected for the following deficiencies:

(1) Test for transmission for overheating

(2) Test transmission for slippage

(3) Inspect for leaking seals

(4) Noisy transmission; Noise may indicate internal damage to transmission.

(5) Inspect for proper shifting of transmission.

(6) Inspect transmission shifter and linkage for proper operation

(7) Inspect for missing and damaged plates, guards, and pans.

(8) Inspect for damaged transmission oil cooler lines and fittings.

(9) Inspect for damaged transmission oil pan.

b. TRANSMISSION REMOVED FROM VEHICLE. During the pre-induction testing, it is determined that the transmission will require removal for further inspection or repairs, the following additional inspections shall be conducted:

(1) Inspect the transmission torque converter for worn coupling gears and bearings.

(2) Inspect engine fly wheel (ring gear/flex plate) for cracks and damaged gears

(3) Inspect transmission clutch pack.

(4) Inspect transmission housings for cracks and missing hardware.

(5) If transmission is removed from the vehicle for major repairs, transmission is to be overhauled in accordance with procedures identified in TM-3825-24P/10.

c. PASS/FAIL: The transmission shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A). During the final inspection/road test, the transmission shall operate as designed. No slippage of the transmission clutches are permitted. Hydraulic leaks greater than Class II are not acceptable. Transmission shall not make unusual and loud noises. Transmission shifter and shift linkage shall work without binding or excessive play. During normal operation, the transmission shall shift smoothly and without hesitation. All guards, plates, and pans (oil) shall be functional and installed in their proper location. Transmission torque converter shall

operate as designed with out loud noise and shall be securely fastened to the transmission flywheel (ring gear/flex plate). Transmission flywheel (ring gear/flex plate) shall contain no cracks or damaged starter ring gear. The flywheel and torque converter shall be securely fastened together with no missing attaching hardware. Transmission shall be securely mounted to the vehicle engine and frame assembly. Transmission cooler oil lines shall be free of corrosion, damage, flat spots, kinks, leaks, and rounded of fittings. Transmission cooler lines shall be secured in their mounting location. Missing mounting hardware is not permitted. Transmission shall not overheat during normal operation.

(6) BRAKE SYSTEM.

a. TEST PROCEDURE.

(1) Inspect brake pads for wear.

(2) Inspect all brake hoses for damage, deterioration, ruptures, and leaks.

(3) Inspect parking/hand brake assembly for proper function.

(4) Inspect parking/hand brake lining and brake drum for wear and damage,

(5) Inspect parking/hand brake cable, levers, mounting brackets, clamps, and hardware for missing parts and proper operation.

(6) Inspect brake caliper for damage, seal leaks, and proper operation.

(7) Inspect brake rotors for scores, heat cracks, out of roundness and oversize. Inspect rotors for lateral runout, parallelism, cracks and burnt marks.

(8) Inspect wheel bearings adjustment. Also inspect grease seals for evidence of grease leaks.

(9) Inspect Hand/Parking brake indicator for proper operation.

b. PASS/FAIL

(1) Brake pads shall meet or exceeds specifications identified in TM-3825-24/5 VOL 1. Group 4, CTS-4089Y, Pages 7 through 9. Replace brake pads that do not meet specifications.

(2) Brake lines and hoses shall meet or exceeds specifications identified in TM-3825-24/5 VOL 1, Group 4, CTS-4363, Chapter 1, Pages 5 and 6, and Chapter II, Page 4. Replace/Repair brake lines and hoses that do not meet specifications.

(3) Parking/Hand brake assembly shall meet or exceed specifications identified in TM-3825-24/5 VOL 1, Group 4, CTS-4098, Pages 1 through 4. Replace/Repair parking/hand brake components that do not meet specifications.

(4) Brake calipers shall meet or exceed specifications identified in TM-3825-24/5 VOL 1,Group 4, CTS-4089B, pages 1 through 13. Replace/Repair brake calipers that do not meet specifications.

(5) Brake rotors shall meet or exceed specifications identified in TM-3825-24/5 VOL 1, Group 4, CTS-4102A, pages 7 through 10. Replace/Repair rotors that do not meet specifications.

(6) Wheel bearing adjustment and seals shall meet specifications identified in TM-3825-24/5 VOL 1, Group 17, CTS-4148A, Pages 7 through 17. Adjust, Repair, and Replace wheel bearing and seals that do not meet specifications.

(7) Park Brake (Hand/Parking Brake) indicator shall operate as identified in TM-3825-24/5 VOL 1, Group 4, CTS-4363, Chapter I, Page 4. Repair/Repace indicator assemblies that do no meet specifications. Inspection procedures are identified in TM-3825-24/5 VOL 1, Group 4, CTS-4363, Chapter 1, Page 4.

(7) HYDRO-MAX BRAKE BOOSTER SYSTEM.

a. INSPECTION PROCEDURES.

(1) Inspect master cylinder reservoir fluid level. Inspect for external leaks at hydraulic line connections or at master cylinder mounting flange. Inspect compensating valve by watching for surges of fluid in reservoir when brake pedal is depressed. Inspect for brake pedal fade under steady foot pressure.

(2) Inspect stop light switch for proper operation.

(3) Inspect brake pedal operation. Inspect for clearance between pedal and toe board when pedal is fully depressed. Inspect brake pedal assembly for excessive side movement. Inspect brake pedal pad for excessive wear and proper fit. Inspect for missing brake pedal pads.

(4) Inspect fluid level in the hydraulic pump assembly. Inspect pump and hoses for leaks. Inspect pump and hoses for missing and loose mounting hardware and brackets.

(5) Inspect pressure differential valve for proper operation, loose mounting hardware, leaks, and loose or corroded electrical connections.

(6) Inspect reserve power system for proper operation. Inspection procedures are identified in TM-3825-24/5 VOL 1, Group 4, CTS-4363, Chapter 1, Page 4.

(7) Inspect brake pressure indicator for proper operation. Inspection procedures are identified in TM-3825-24/5 VOL 1, Group 4, CTS-4363, Chapter 1, Page 4.

(8) Inspect the electrical Hydraulic Pump for correct operation. Inspect electrical lead wires and connector for loose fit, corrosion, and damage.

(9) Inspect booster unit housing assembly for leaks, corrosion, cracks, missing hardware, and loose fit to vehicle fire wall. Inspect hydraulic line fitting for leaks. Inspect electrical switches for damage, corrosion, proper operation, loose electrical connections, and damaged electrical wiring harness.

b. PASS/FAIL.

(1) Master cylinder reservoir shall be filled to correct fluid level. No fluid leakage is acceptable. Compensating valve shall work as intended. Brake pedal shall not fade under steady foot pressure.

(2) Stop light switch shall operate as intended.

(3) Brake pedal shall not reach the toe board under normal operation. Brake pedal assembly shall not contain wear that permits movement from side to side. Brake pedal rubber pad shall be installed and shall stay inplace when foot pressure is applied.

(4) Hydraulic pump assembly shall be filled to correct fluid level.

(5) Reserve power system shall meet requires identified in TM 3825-24/5 VOL 1

(6) Brake pressure indicator shall meet requirements in TM 3825-24/5 VOL 1.

(7) Electrical hydraulic pump shall operate as intended.

(8) Booster unit housing shall contain no leaks, corrosion, cracks, missing hardware and loose fit to vehicle fire wall. Electrical switches shall be free of corrosion, loose fit, and damaged wiring. Leakage of fluid is not permitted.

(9) The Hydro-Max Booster Assembly shall be IROANed of all deficiencies identified on the Pre-Induction Checklist and the trouble shooting guide in TM-3825-24/5 VOL 1, Group 4, CTS-4363, Chapter III, Pages 1 through 6.

(8) FRONT AND REAR AXLE ASSEMBLIES.

a. INSPECTION PROCEDURE, FRONT AXLE.

(1) Inspect front I Beam axle for stress cracks and abnormal bending.

(2) Inspect kingpins for looseness. Procedure found in TM-3825-24/5 VOL 1, Section CTS-4011D-page 2.

(3) Inspect front wheel alignment. Wheel alignment shall be within specification found in TM-3825-24/5 VOL 1, Section CTS-4012E, pages-4 through 9.

(4) Inspect tie rod ends for looseness, that is if axial movement is found in the ball socket assembly.

(5) Inspect drag links for looseness, that is if axial movement is found in the ball socket assembly.

CAUTION

DO NOT PRY ON STEERING LINKAGES WITH A BAR AS DAMAGE MAY RESULT

(6) Inspect the steering knuckle thrust bearing, wheel bearing cones and cups.

(7) Inspect the tightness of the steering connections such as tie rod arms, steering arm, etc.

(8) Inspect leaf springs, spring hangers, U bolts, and U bolt seats for damaged, corrosion, and missing components.

(9) Inspect for loose, bent or broken shock absorbers, mountings and linkage. Inspect all rubber bushings and grommets. Inspect link and bushing for wear.

b. PASS/FAIL

(1) Front axle I beam shall contain no stress cracks or any bending that is considered as not manufacture in.

(2) Replace kingpins or kingpin bushings which are not within specifications listed in TM-3825-24/5 VOL 1, Section CTS-4011D Page 2.

(3) Wheel alignment shall be within specifications found in TM-3825-24/5 VOL 1, Section CTS 4012E, pages 4 through 9.

(4) Replace tie rod ends if looseness, that is axial movement is found in the ball socket assembly. The ball stud should not move along its axis (centerline) when the tie rod is grasped and shaken by hand.

(5) Replace drag link if looseness, that is axial movement is found in the ball socket assembly. The ball stud should not move along its axis (centerline) when the tie rod is grasped and shaken by hand.

CAUTION

DO NOT PRY ON STEERING LINKAGES WITH A BAR AS DAMAGE MAY RESULT

(6) Replace if rollers or cups are worn, pitted or damaged in any way.

(7) Steering connections such as tie rod arms, steering arms, etc., shall be tighten to specifications identified in TM-3825-24/5 VOL 1, Section CTS 4011D, pages 7 and 8.

(8) Leaf springs, spring hangers, U bolts, and U bolt seats shall contain no damaged, corrosion, or missing components (nuts, bolt, washers, spring clips).

(9) Replace bent or broken shock absorbers, mounting, and linkage. Replace rubber bushings and grommets if damaged or missing. Shock absorbers shall be firmly secured to vehicle with no missing hardware (nuts, bolts, washers, brackets, spacers, etc.).

c. INSPECTION PROCEDURES, REAR DRIVE AXLE.

(1) Inspect yoke seal, wheel bearing seals, carrier seals and pinion housing seals for leakage greater that Class II leaks.

(2) During road testing, special emphasis shall be in place for mechanical noises or vibrations which may identify internal axle damage or axles requiring internal adjustments.

(3) Inspect leaf springs, spring hangers, U bolts, and U bolt seats for damage, corrosion, and missing components.

d. PASS/FAIL.

(1) Rear axle seals shall contain no leaks greater that Class II leaks as identified in this SOW.

(2) Rear axles shall contain no unusual mechanical noises or vibrations. If during the pre-induction test it is determined that the axle requires repair, repair/replace in accordance with TM-3825-24/6 VOL 2 Section CTS 4046E, pages 1 through 26.

(3) Leaf springs, spring hangers, U bolts, and U bolt seats shall contain no damaged, corrosion, or missing components (nuts, bolt, washers, spring clips).

(9) TIRES AND WHEELS.

a. TEST PROCEDURES.

(1) Inspect tire inflation. Inspect tire for cupping, chunking, cuts, and cracks.

(2) Inspect wheels for cracks, breaks, warpage, and damaged mounting holes.

b. PASS/FAIL.

(1) Each tire must have 4/32 inch or more thread remaining and be in good serviceable condition. All tires on a vehicle shall be matched to proper performance and approximately equal life. Tires shall not show evidence of chunking. Tires shall not have cuts or cracks greater that one inch in length, 1/8 inch wide. Tire shall not have cuts or breaks, regardless

of length or width, which extend to the fabric. Rubber separation or bulges on tire side walls are not acceptable. All tires that do not meet these requirements shall be replaced.

(2) Wheels shall bee free of cracks, breaks, warpage, and damage that will result in abnormal tire wear or misalignment. Wheels shall be free of damage to the lug bolt mounting holes. Replace wheels that do not meet these requirements.

(10) PROPELLER SHAFT.

a. TEST PROCEDURES.

(1) Inspect output and input end yokes at both the transmission and axle for looseness.

(2) Inspect end yokes at the transmission output shaft and the axle input shaft for radial looseness.

(3) Inspect for looseness across universal joints.

(4) Inspect slip yoke for excessive radial movement.

(5) Inspect propeller shaft for missing balance weights, damaged or bent tubing. Inspect propeller shaft for any foreign material

(6) Inspect propeller shaft run out limits.

(7) Inspect propeller shaft for missing or loose welch plugs.

(8) Inspect center propeller shaft bearing for loose mounting bolts, deteriorated or oil soaked center bearing insulators.

b. PASS/FAIL

(1) If looseness is identified during the pre-induction test, remove propeller shaft and tighten output and input yokes to specifications. Replace if necessary.

(2) End yoke looseness may also indicate internal problems with the transmission and drive axle. After yokes have been tighten and looseness still prevails, Refer to appropriate transmission/drive axle manual section for limits. The transmission output yoke and the drive axle input yoke shall be within limits as prescribed in appropriate manual section. If not within limits, repair/replace transmission or axle as required.

(3) Looseness across universal joints shall not exceed .006" (.152mm) maximum.

(4) Looseness between slip joint and tube shaft shall not exceed .007" (.0178mm).

(5) Replace propeller shafts that are missing balance weights, damage or contains bent tubing. Remove any foreign material from propeller shafts.

(6) Run out checks are taken with propeller shaft in vehicle. Run out reading shall not exceed .010" (.254mm) over readings illustrated in Figure 12 of TM-3825-24/5 VOL 1, Section CTS-4017C page 7. Repair/replace propeller shaft as required.

(7) Welch plugs shall be tightly secured inplace. No welch plugs shall be missing.

(8) Center bearing shall be mounted securely in its proper place. No missing mounting hardware (nuts, bolts, washers) is allowed. Replace center bearing if deteriorated or center bearing is oil soaked.

(9) Replace/Repair procedures can be found in TM-3825-24/5 VOL 1, Section CTS-4017C, pages 1 through 15 and Section CTS-4352, pages 1 through 14.

(11) EXHAUST SYSTEM

a. TEST PROCEDURES.

(1) Inspect exhaust system pipes, muffler, and tail pipe for corrosion, leaks, holes, and proper operation.

(2) Inspect exhaust mounting system for missing brackets, clamps, U bolts, and spacers.

b. PASS/FAIL.

(1) Exhaust pipes, muffler, and tail pipe shall contain no excessive corrosion, leaks, or holes. Exhaust system shall operate as designed.

(2) Missing or loose mounting brackets, clamps, U bolts, or spacers are not permitted. All exhaust mounting hardware shall be inplace and functional.

(12) VEHICLE FRAME.

a. TEST PROCEDURES. Inspect frame, side rails, engine and transmission mounts, and frame cross members for loose mounting and broken welds.

b. PASS/FAIL. Repair frame, frame side rails, engine and transmission mounting frame, and cross members by welding, tightening mounting hardware, and replacement of item. If vehicle frame is beyond repair and requires replacement, subject vehicle is not to be repaired under provisions of this IROAN SOW. It is acceptable to replace frame side rails, engine and transmission mounting frames, and any cross members.

Repair/Replace procedures can be found in TM-3825-24/5 VOL 1, Section CTS-4004C, pages 1 through 20.

(13) CAB ASSEMBLY, VEHICLE GLASS, WINDSHIELD WIPER ASSEMBLY, MIRRORS, VEHICLE WORK LIGHTS,AND MUD FLAPS.

a. INSPECTION PROCEDURE.

(1) Inspect cab assembly, battery box, cab ventilation/heater for breaks, cracks, and proper operation. Doors, hood and hardware shall function as intended. Inspect hood and doors for damage. Inspect hood insulation and hardware.

(2) Inspect vehicle glass (windshield, door windows, rear cab glass) for breaks, cracks, and loose fit.

(3) Inspect windshield wiper assembly for proper operation.

(4) Inspect mirrors and mirror brackets.

(5) Inspect vehicle work lights for missing lights and proper operation.

(6) Inspect rear axle mud flaps for deterioration and security.

b. PASS/FAIL.

(1) Vehicle cab, doors, and hood assembly shall be free of damage. Door and hood mounting hardware (nuts, bolt, washers, hinges, springs, and cables) shall be installed and operating as intended. Hood securing straps shall function as designed. The battery box shall be free of corrosion. Battery box shall be clean of acid deposits and foreign material. Repair \Replace any ventilation/heater control cables, hoses, screens, heater radiator, blowers that do not function as intended.

(2) Repair/Replace door and cab glass that are cracked or broken. Replace glass molding if windshield or rear window is loose in opening.

(3) Windshield wiper assembly shall operate as intended. Wiper blades shall be replaced 100 per cent. Replace/repair as required to meet this requirement.

(4) Vehicle mirrors and mirror brackets shall be secure. No broken or missing mirrors or mirror brackets is allowed. Adjustment features shall function properly.

(5) Replace/Repair as required to meet this requirement.

(6) Vehicle work (spot) lights shall be securely mounted. Broken or missing light fixtures are not permitted. Adjustment features shall function properly. All work lights shall function as intended. Replace/Repair as required to meet this requirement.

(7) Rear mud flaps shall be securely mounted to vehicle. Missing or deteriorated flaps are not permitted. Replace as required to meet this requirement.

d. **SWEEPER UNIT (TYMCO MODEL 600) LESS AUXILIARY ENGINE**.
The sweeper unit consist of the hopper assembly, blower assembly, hydraulic system, gutter broom, pickup head, dust control system, and a hand hose assembly. Refer to the TYMCO Model 600 Service and Parts Manual (TM-3825-24&P/7) for trouble shooting and repair procedures.

(1) Hopper Assembly (501713).

The Hopper is designed to contain the load of material swept up during sweeping operations. The Hopper trouble shooting guide, parts list, service and maintenance procedures can be founded in Section B, pages B-1 through B-12 of TM-3825-24&P/7. The Hopper Assembly shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. TEST PROCEDURES

(1) There are three inspections doors on the hopper assembly. There is one on each side of the hopper and one at the rear of the hopper. Inspect the inspection doors for damage and proper operation. Inspect door seals for deterioration, damage and leakage. Inspect door hinges and door latches for proper operations . Inspect door hinge and latch mounting hardware for missing or broken components.

(2) There are two hopper transition ducts. The duct located on the right side is bolted to the hopper. The transition duct located on the right side is quickly removed by clamps and J bolts. Inspect both transitions for damage. Inspect transition seals for deterioration, damage and leakage. Inspect transition duct mounting hardware (nuts, bolts, washers, J bolts, and latches) for missing or damaged components. Inspect left transition latch and J bolts for correct adjustment and proper operation.

(3) Inspect rear dump door for damaged and missing components. Inspect door seal for deterioration, damage and leakage. Inspect door hinges and latch for proper operation and missing components. Inspect door hydraulic cylinder for proper operation, damage, and leakage. Inspect cylinder hydraulic hoses for blisters or deformities to the outer covering. Inspect hoses for excessive abrasion or scrubbing areas on the outer surface of the lines or hoses. Inspect hose mounting hardware (nuts, bolts, washers, clamps, etc.) to assure they are securely inplace and none of these items are missing.

(4) Inspect rear dump door toggle switch assembly for damage and proper operation. Inspect toggle switch guard assembly for damaged and missing mounting screws.

(5) The hopper assembly contains the vehicle stop lights, strobe light and guard, side clearance lights and reflectors, and some work (spot) lights. The hopper assembly also contains wiring harness for these components. Inspect all light assemblies for proper operation and damage. Inspect light assemblies for missing hardware and to assure lights are firmly secured to the hopper assembly in their proper location. Inspect all hopper reflectors for damage. Inspect electrical wiring harness for damage.

(6) Inspect the inner hopper screen and chip seal for damaged and missing hardware. Inspect screen and chip seal to assure they are tightly secured inplace.

(7) Inspect the hopper assembly hull for damage, holes, and missing hardware.

b. PASS/FAIL

(1) Replace/Repair damaged inspection doors. Replace deteriorated, damaged and leaking door seals. Replace all missing nuts, bolts, and washers. Replace/Repair damaged or missing door hinges and handles.

(2) Replace/Repair hopper transition ducts if damaged. Replace deteriorated, damaged and leaking transition seals. Replace all missing nuts, bolts, and washers. Replace worn J bolts. Replace damaged transition latch. Adjust left side transition latch and J bolts to assure proper fit of the transition to the hopper.

(3) Replace/Repair damaged rear dump door. Replace all missing nuts, bolts, and washers. Replace deteriorated, damaged and leaking door seal. Replace/Repair damaged or missing door hinges and latches. Repair/Replace damaged or non functional door hydraulic cylinders. Replace hydraulic hoses that are damaged and leaking. All hydraulic cylinder and hose mounting hardware shall be inplace and securely tighten. No missing nuts, bolts, washers, and clamps are permitted.

(4) Replace damaged or nonfunctional dump door toggle switch. Replace/Repair damaged or missing toggle switch guard and mounting hardware.

(5) Replace/Repair nonfunctional or damaged lights and reflectors. All lights and reflectors are to be firmly mounted to the hopper assembly in their correct location. Repair/Replace damaged or non operational hopper strobe light and strobe light guard.

(6) Replace/Repair inner screen and chip seal if damaged. Screen shall not contain any holes larger that the original screen holes. Screen and chip seal shall be tightly mounted in their location with no missing mounting hardware or brackets.

(7) Repair hull assembly as required. Hull assembly shall contain no holes that will result in air leakage from the interior of the hopper assembly. All hopper accessory mounting brackets, cover plates, doors, latches, and seal shall be operational with no missing components and hardware. Welding of cracks and holes is permitted.

2. Blower Assembly (501722)

The Blower Assembly furnishes both pressure for the blast orifice as well as suction for the suction nozzle. The Blower Assembly trouble shooting guide, parts list, and disassembly and assembly instructions are found in Section C, pages C-1 through C-9 of TM-3825-24&P/7. The Blower Assembly shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. TEST PROCEDURES

(1) Inspect blower assembly for unusual noise/vibration and proper operation.

(2) Inspect blower assembly bearings for overheating. Inspection shall normally be performed immediately following the pre-induction test, but not sufficient duration to allow the bearings to return to ambient temperature.

(3) Inspect blower pulley for damage and looseness.

(4) Inspect drive belt housing and inspection covers for damaged and missing components.

b. PASS/FAIL.

(1) Replace/Repair blower or blower components if during the pre-induction inspect unusual noise/vibration and poor operation was identified.

(2) Replace overheating blower bearings. Replace any missing blower bearing mounting bolts, nuts, and washers. Replace bearing hub if damaged.

(3) Replace damaged pulleys. Pulley shall be tightly secured to blower shaft. Blower belts shall be replaced 100 per cent.

(4) Replace/Repair missing, damaged, or loose drive belt inspection covers and housing. No missing or loose mounting hardware is permitted. Replace or tighten mounting hardware as required.

3. Pick-Up Head Assembly (501721)

The pickup head severs as the sweeping component of the sweeper. The pickup head assembly, blast orifice, cylinder assembly, and skids trouble shooting guide and parts list can be found in Section E, pages E-1 through E-12 of TM-3825-24&P/7. The Pickup Head Assembly shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. INSPECTION PROCEDURE.

(1) Inspect pressure/suction hoses for tears, deterioration, blockage, and improper fit. Inspect hoses for missing or loose hose clamps.

(2) Inspect skid plate(s) adjustment. Inspect skid(s) for wear.

(3) Inspect pickup head curtains for deterioration, wear, and improper fit. Inspect curtain mounting hardware for damaged, looseness, and missing components. Inspect pick up head basic assembly for damaged, corrosion, and missing components.

(4) Inspect blast orifice for correct operation. Inspect blast orifice for damaged, missing components, and blockage.

(5) Inspect the center debris deflector assembly for bends and breakage.

(6) Inspect Up-Stop assemblies, Pick-Up head lift cylinders, lift chain assemblies, front and rear springs, and drag links for damage, leaks, corrosion, and missing components.

b. PASS/FAIL.

(1) Pressure/Suction hoses shall contain no tears or deterioration. Replace hoses if these conditions exist. Pressure/Suction hoses shall be free of blockage and shall be property installed. Tighten loose hose clamps. Replace defective or missing hose clamps.

(2) Replace worn skid plates. Replace both plates even if only one plate is worn to the extent requiring replacement. Replace skid plates when required with spark resistant skids, part number 501157 for right hand and part number 501158 for left hand skid. Adjust skid plates in accordance with instructions provided in TM-3825-12/3. Adjustment skid plates when new curtains are installed on pickup head assembly.

(3) Replace pickup head assembly curtains if torn or deteriorated. Repair/Replace curtain mounting brackets and hardware. Basic pickup head assembly shall be free of rust and corrosion. Pickup head assembly shall contain not holes that are not designed into assembly. Repair by welding is permitted.

(4) Blast orifice shall be set at 5/8" as instructed by TM-3825-12/3. Replace blast orifice assembly curtains if torn or deteriorated. Replace/repair missing brackets and mounting hardware.

(5) Replace center debris deflector curtain if torn or deteriorated. Replace/repair deflector if bent or broken. Replace center deflector chains and mounting hardware if broken or missing.

(6) Up-stop assemblies shall be operational and free of corrosion. Up-stop assemblies shall not be bent out of place, no missing hardware is permitted. Pick-up cylinders shall function as designed. Replace/repair cylinders that are damaged and/or contains leakage greater than Class II. Replace defective front and rear springs, spring mounting brackets and mounting hardware. Springs shall meet spring setting specification found in TM-3825-12/3. Drag links shall not be bent from factory dimensions. All mounting hardware shall be installed and properly tighten.

4. GUTTER BROOM ASSEMBLY(501995)

The gutter brooms digs material loose from the gutter or similar areas and move it in front of the pickup head where it can be picked up and transferred to the hopper assembly. The gutter broom assembly consist of flow control valves, lock valves, cylinder assembly, and torque motors. Trouble shooting guide, parts list, service and maintenance and adjustment procedures can be found in

Section F, page F-1 through F-19 of TM-3825-24&P/7. The Gutter Broom Assembly shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. TEST PROCEDURE.

(1) Inspect gutter broom down pressure, broom angle, shoulder plate, and broom cylinder flow control settings. Inspect gutter broom for wear, damaged, and missing components.

(2) Inspect gutter broom assembly for proper operation. Inspect spring for proper adjustment, wear and/or breakage. Inspect spring mounting hardware.

(3) Inspect gutter broom hydraulic cylinder and motor for proper operation and leakage. Inspect hydraulic valves, hose/lines, and fittings for looseness, damage, and leakage greater than Class II leaks. Inspect hydraulic components for proper operation.

(4) Inspect broom boom assembly for damage, corrosion, and missing components. Inspect boom assembly U-joints for looseness, damaged, and missing hardware.

b. PASS/FAIL.

(1) Broom down pressure, broom angle, shoulder plate and flow control shall be with in settings identified in TM-3825-12/3 and TM-3825-24&P/7. Gutter broom shall free of damage. No missing components or mounting hardware is permitted.

(2) Gutter broom assembly shall operate as intended. Replace spring if damaged and if spring can not be adjusted to maintain correct setting. Replace missing mounting hardware. Replace spring adjustment hardware if unserviceable or missing. If spring adjustment hardware is adjusted to its stop points and broom assembly will not maintain proper setting, replace spring and readjust to correct setting.

(3) Repair/Replace hydraulic boom cylinders and hydraulic motors that do not operate as intended or is damaged. Hydraulic leaks greater than Class II is not permitted. Repair leaks as required. Replace hydraulic hose assemblies and control valves that do not function as intended and is damaged. Replace hydraulic lines that are flatten or kinked to the extent that damaged restricts flow or will result in failure or leakage.

(4) Broom boom assembly shall operate as intended. Boom assembly shall be free of damage and corrosion. No missing hardware is permitted. Boom assembly shall lower, extend, and retract as intended. Boom assembly U-joints shall be free of damage. U-joints shall contain no loose components and shall be securely mounted. U-joints shall operate without binding. Repair/Replace U-joints that are loose internally, binds, and is damaged. Lubricate U-joints after initial inspection or replacement.

5. HYDRAULIC SYSTEM (501913)

The sweeper utilizes a simple design feature a vane pump which is driven by the auxiliary engine. Control valves are solenoid activated by switches located in the truck cab. Valves control gutter

brooms, dump door, and pickup head. Trouble shooting guide, parts list, and service/maintenance procedures can be found in Section G, pages G-1 through G-18 of TM-3825-24&P/7. The Hydraulic System shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. TEST PROCEDURES.

(1) Inspect hydraulic tank assembly for damage, corrosion, and leakage. Inspect tank mounting hardware for looseness and missing components. Inspect hydraulic tank filler cap for correct fit and water tightness. Inspect hydraulic filter assembly for looseness and leakage.

(2) Inspect hydraulic pump for proper operation. Inspect pump for looseness, damage, and leakage. Inspect pump for extreme heating, unusual noise, and poor performance. Inspect pump hose fittings for looseness, damage, and leakage.

(3) Inspect hydraulic oil cooler for damage, corrosion, and leakage. Inspect oil cooler for externally clogging of coils that may restrict air flow through the coil. Inspect hose fittings for looseness, damage, and leakage.

(4) Inspect control valve bank assembly for looseness, damage, and leakage. Test each control valve operation. Inspect control valve bank assembly hose fittings for looseness, damage, and leakage.

(5) Inspect operation of hydraulic cylinders that operate the gutter broom assembly, pickup head assembly, and the dump door assembly. Inspect hydraulic cylinders for damage, looseness, and leakage. Inspect hydraulic cylinders hose fittings for looseness, damage, and leakage.

(6) Inspect hydraulic hose assemblies for damage and leakage. Inspect hose clamps for looseness. Inspect hydraulic hose mounting hardware (nuts, bolts, washers, and clamps).

b. PASS/FAIL.

(1) Hydraulic tank shall be free of damage and corrosion. Leakage of any class is not permitted in the hydraulic tank Replace leaking hydraulic tanks. Replace leaking hose fittings if correct tightness will not stop leakage under system operation pressure. Hydraulic tank shall be securely mounted with no missing mounting hardware. Hydraulic tank filler cap shall fit as intended. Hydraulic tank and system shall be free of water and other pollutants. Hydraulic oil filter shall be replaced 100 per cent.

(2) Hydraulic pump shall be securely mounted to auxiliary engine. No missing hardware is permitted. Leakage at the hydraulic pump is not permitted. Repair/replace leaking pump as required. Replace leaking hose fittings if correct tightness will not stop leakage under system operation pressure. Hydraulic pump shall operate without overheating, unusual noises, or poor performance. Hydraulic system pressure shall be within standards identified in TM 3825-24&P/7.

(3) Hydraulic oil cooler shall be free of damage, corrosion, and leakage. Replace coolers if leakage is present. Replace leaking hose fittings if correct tightness will not stop leakage

under system operation pressure. Hydraulic oil cooler shall be clean and free of air fin restrictions that will prevent air flow through the cooler. Straighten air fins on coolers when possible.

(4) Hydraulic control valve bank shall be secured in its proper mounting position. No missing mounting hardware is allowed. Each control valve shall operate as intended. Replace leaking hose fittings if correct tightness will not stop leakage under system operation pressure. Repair/replace control valves that do not operate as intended.

(5) Hydraulic cylinders (gutter broom, pickup head, dump door) shall operate as intended. Repair/replace cylinders that do not function correctly. Replace/repair hydraulic cylinders that contains leakage greater than Class II. Missing mounting hardware is not allowed.

(6) Hydraulic hoses shall contain no damage or leakage. Hose fittings shall be tighten as required. No missing hose mounting hardware (clamps, huts, bolts, and washers) is allowed. Replace/repair hose assemblies as required.

6. Water System (501782).

The water system controls dust with a fine mist spray or fan spray of water onto the surface just before it is swept. The water spray is produced by water under pressure being forced through pressure spray nozzles. This water system is NOT designed to flush the surface. Water system trouble shooting guide, parts list, and service and maintenance procedures can be found in Section H, pages H-1 through H-11 of TM 3825-24&P/7. The Water System shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A)

a. Test Procedures.

(1) Inspect water tank for leaks, corrosion, and damage. Inspect water tank mounting hardware for broken or missing components. Check water tank to assure it is sucurely fastened in its mounting position. Inspect all water tank fittings for tightness and damage.

(2) Inspect both suction filtration strainers.

(3) Inspect the low pressure electrical water pump for proper operation. Inspect water pump to assure it is securely fastened in its proper mounting position. Inspect water pump mounting hardware for broken, damaged, or missing components. Inspect water pump water hoses and water line fitting for tightness and damage. Inspect water pump electrical connections, wire harness, switches and relays for proper operation.

(4) Inspect water manifold for leaks, damaged, corrosion, and missing components. Inspect and test all electrical operated valve and their control switches located on the operators control console inside the truck cab. Inspect and test all pressure switches and low water warning lights for proper operation. Inspect all hose and line fittings for damaged, looseness, corrosion, and missing components

(5) Inspect all water system spray nozzles located on the pickup head assembly, gutter broom assemblies, and the hopper assembly for proper operation, missing or broken

components. Inspect nozzle water lines and hoses for damage, corrosion, and leaks. Inspect all water hose and line mounting hardware for broken, missing, or loose components.

(6) Inspect all water system hoses and lines for damage, leaks, corrosion, and missing or loose mounting hardware.

b. PASS/FAIL.

(1) Water tank shall contain no leaks, corrosion or damage that will restrict proper operation. Water tank shall be securely mounted in its proper mounting position with no missing, broken, or loose mounting hardware. Water tank metallic lines shall contains no flat spots or kicks that may restrict fuel flow or eventually result in leakage.

(2) Replace suction filtration strainer filters 100 per cent.

(3) The low pressure electrical water pump shall operate as intended. Water pump shall be securely mounted in its proper place with no missing, broken, or loose mounting hardware and brackets. Water pump hoses and line fittings shall contain no leaks, corrosion, or damage that will restrict water flow or eventually result in leakage or complete failure. Electrical connections, electrical terminals, and electrical wires shall contain no damage that may result in improper operation the electrical devices that the harness is connected to. Electrical connections shall be free of corrosion and all connections shall be securely tighten. Insulated electrical wires shall be free of any areas in the insulation that exposes bare electrical wire(s).

(4) The electrical water pump shall be freeze protected. Freeze protection procedures are contained in TM 3825-24&P/7, Section H, page H-6.

(5) The water manifold shall contain no leaks, damage, or corrosion that may restrict proper operation. Water manifold shall be securely mounted in its proper position with no missing , broken, or damaged mounting hardware or brackets. Electrical operated valves and their controls shall function as intended. The low pressure switch shall disengage the water pump and activate the low water warning light when the tank is emptied or the pump has lost its prime. Water system trouble shooter's guide is located in TM 3825-24&P/7, Section H, page H-3.

(6) Spray nozzles located on the Pickup Head Assembly and the Gutter Broom Assemblies shall operate as intended. Spray nozzles shall be securely mounted in their proper mounting position with no loose, missing, or damaged mounting hardware.

(7) The Water System metallic water lines shall contains no flat spots or kicks that may restrict water flow or eventually result in leakage. Nonmetallic water lines shall contain no blisters or deformities to the outer covering. Stripped or rounded off fitting are not permitted. No excessive abrasion or scrubbing areas on outer surface of both the nonmetallic and metallic hoses and lines are permitted.

7. Fuel System (501742)

The fuel system for the truck and sweeper is supplied with a 50 gallon fuel tank from which fuel is supplied to the truck engine and the auxiliary engine. The fuel gauge is located on the truck instrument panel. The fuel system parts list can be found in Section I, pages I-1 through I-2 of TM 3825-24&P/7. The Fuel System shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

b. TEST PROCEDURES

(1) Inspect fuel tank and lines for rusting and leakage. Inspect fuel tank mounting hardware for missing and damaged parts.

(2) Inspect auxiliary engine and truck engine fuel supply and return lines from the fuel tank to the engines.

(3) Inspect fuel tank sending unit and gauge for proper operation.

b. PASS/FAIL

(1) Metallic fuel lines shall contains no flat spots or kicks that may restrict fuel flow or eventually result in leakage. Nonmetallic fuel lines shall contain no blisters or deformities to the outer covering. Stripped or rounded off fitting are not permitted. No excessive abrasion or scrubbing areas on outer surface of both the nonmetallic and metallic hoses and lines are present. All fuel lines and hose mounting hardware (nuts, bolts, washers, clamps, etc.) are securely inplace and none of these items are missing. All fuel filters and air filters have been replaced 100 per cent.

(2) Fuel tank contains no rust or leaks. Fuel tank is securely mounted in its cradle. Fuel tank sending unit functions correctly and reflects a true fuel level. Inspect auxiliary engine and truck engine fuel lines from the fuel tank to the engines. Metallic fuel lines shall contain no flat spots or kicks that may restrict fuel or eventually result in leakage. Nonmetallic fuel line shall contain no blisters or deformations to the outer covering. No excessive abrasion or scrubbing areas on outer surface of both metallic or nonmetallic hoses and lines are present. All fuel lines and hose mounting hardware (nuts, bolts, washers, clamps, etc.) are securely inplace and none of these items are missing.

(3) Fuel tank sending unit shall operate as intended. Fuel tank fuel level shall register on the fuel gauge located on the truck instrument panel.

8. Control System (501837)

The control panel is located inside the truck cab and is mounted within easy reach of the operator. The control panel contains such gauges as the power unit tachometer, oil pressure gauge, water temperature gauge, and the hour meter. All these gauges and controls are for the operation of the power unit. This section also contains the control system wiring diagram and fuse panel, hopper lighting wiring diagram, and the power unit (auxiliary engine) wiring diagram. Trouble shooting guide and parts list can be found in Section J, pages J-1 through J-8 of TM-3825-24&P/7/. Pages J-9 through J-11 contains the battery box assembly (501994), battery box parts list, and U.S.M.C. Battery cable Layout. The Runway Sweeper is a **12 VOLT DC System**. The Control System and

Battery Box Assemblies shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. INSPECTION PROCEDURES.

(1) Inspect and test the washer warning and the low water lights for proper operation. Inspect light fixtures for missing or broken lens. Inspect light fixtures for corrosion, damaged, looseness, and missing or broken components.

(2) Inspect and test all switches (both keyed and toggled) and push buttons for proper operation. Inspect switches and push buttons for corrosion, damage, and looseness.

(3) Inspect and test engine gauges for proper operation. Test the oil pressure gauge, hour meter, volt meter, water temperature gauge, and the tachometer. Inspect engine gauges for readability, damage, looseness, and corrosion.

(4) Inspect and test the throttle cable assembly and the leaf pressure bleeder cable for proper operation. Inspect cable assemblies for corrosion, looseness, and missing or broken components.

(5) Inspect fuse panel for corrosion, damage and looseness.

(6) Inspect control system electrical wiring harness for damage and corrosion. Insulated electrical wires shall be free of any areas in the insulation that exposes bare electrical wire(s). Wire terminals and connectors shall be tightly secured to the electrical device terminals.

(7) Inspect the control system battery box, NATO Slaving receptacle, and battery cable assemblies for corrosion, damaged, missing and broken components.

b. PASS/FAIL.

(1) Testing the Control System devices in most cases are conducted during Inspection Procedures addressing various components of the Runway Sweeper. All components located on the Control System panel shall function as intended. These devices shall be free of corrosion, broken or missing components and shall be securely fastened in their proper position.

(2) All engine gauges shall operate as intended and shall be easy to read. Gauges may be tested by operating the vehicle engines. Replace all gauges that are suspected of improper readings or can not be read. Replace all gauges that are broken or damaged.

(3) The throttle cable and leaf pressure bleeder cable shall operate as intended. Cable assemblies shall maintain their stop position when set. Cable assemblies shall be securely fastened in their proper mounting position with no missing, broken, or loose mounting hardware. Cable assemblies shall be easy to pull requiring no mechanical assistance.

(4) Fuse panel shall be securely mounted in its proper location with no damaged, corrosion, broken or missing mounting hardware. All blown fuses shall be replaced with proper ampere fuses. Fuses must maintain their fuse links during normal operations.

(5) The electrical wiring harness insulated electrical wires shall be free of any areas in the insulation that exposes bare electrical wire(s). Wire terminals and connectors shall be tightly secured to the electrical device terminals. Electrical connectors shall be free of corrosion.

(6) Battery box shall be securely mounted to the vehicle with no missing or broken mounting hardware. Battery box latch shall operate as intended. Electrical cables shall be free of any areas in the insulation that exposes bare electrical wire(s). Battery connectors shall be free of corrosion damage that will prevent the connector from being tighten or retain tightness.

9. Dual Steering (501766) International S-1654

The dual steering components allow the driver/operator to drive the sweeper from either right or left side of the truck cab. The major components of the dual steering are: two steering wheels and columns, two brake pedals, two accelerators, centrally located control panel, and floor mounted windshield washer. Parts list and wiring diagram can be found in Section K, pages K-1 through K-6 of TM-3825-24&P/7. The Duel Steering System shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. TEST PROCEDURES.

(1) Inspect steering wheels for cracks that may hinder operators grip or that may result in failure of the steering wheel. Inspect and test horn buttons for proper operation.

(2) Inspect left and right side steering brackets, mounting hardware, covers and plates, and housings for damaged, corrosion, missing or broken components. Inspect the hydraulic brake and accelerator cable mounting brackets and hardware for damage, corrosion, missing or broken components. Inspect the control assembly mounting console for damaged, corrosion, missing or broken components.

(3) Inspect the steering shafts, yoke assembly, steering shaft gears, set collars, and support brackets for damaged, corrosion, missing or broken components. Inspect and test dual steering mechanical linkage to assure vehicle dual steering is functional from both sides. Inspect and test both steering shaft universal joints for wear, binding, and looseness. Inspect and test synchronization of the left and right steering assemblies.

(4) Inspect and test turn and hazard light switches installed in the left and right steering assembly.

b. PASS/FAIL.

(1) Steering wheel material shall be free of large cracks and chunks. Hair line cracks are permitted. Chunks of material missing from steering wheel is not permitted. No missing horn buttons are permitted. Horn button shall operate as intended. Repair/replace as required.

(2) Steering brackets, mounting hardware, covers and plates, and housings shall be securely mounted in their proper mounting positions. These components shall contain no missing, loose, or damaged mounting hardware. The hydraulic brake and accelerator cable mounting brackets shall be securely mounted in their proper place with no missing, damaged, or loose hardware. The control assembly console shall contain no damage and shall be firmly secured to its mounting location. No missing, damaged, or loose mounting hardware is permitted. Repair/replace as required.

(3) Steering shafts, yoke assemblies, steering shaft gears, set collars, and support brackets shall operate as intended. Damage, missing or broken components are not permitted. Repair/replace as required. Vehicle shall steer from both sides of vehicle as intended with out binding or excessive looseness between the right and left steering assemblies. Repair/replace as required. The left and right steering assemblies shall be synchronized in their function.

(4) Both the right and left steering assembly turn signal and hazard switches shall operate as intended. Repair/replace as required.

10. Auxiliary Hand Hose (500244)

The auxiliary hand hose is to clean areas inaccessible to the sweeper. Trouble shooting guide and parts list can be found in Section L, paged L-1 through L-4 of TM-3825-24&P/7. The Auxiliary Hand Hose Assembly shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. TEST PROCEDURES.

(1) Inspect auxiliary hand hose assembly mounting brackets, straps, boom assembly, hose door, and inspection door for damage, corrosion, missing or damage mounting hardware. Inspect boom assembly universal joint, spring and chain assembly for damage, missing or broken components.

(2) Inspect hand assembly hose, hose clamps and pickup tube for damaged, missing or broken components.

b. PASS/FAIL.

(1) Auxiliary hand hose mounting brackets shall be securely mounted in their correct location with no damaged, missing, or broken mounting hardware. Tie down straps shall be replaced 100 per cent. Boom assembly shall function as intended. Boom assembly universal joint shall be free of wear that may cause binding or stiff movement of the boom assembly. Boom spring and chain shall support the boom assembly and hand tube as intended. Repair/replace as required.

(2) Hand hose shall be free of flatten areas, rips and tears. Hose clamps shall be tight and capable of maintaining tightness once tighten. No missing clamps are permitted. Hand hose pickup tube shall be free of fatten areas, large dents, and holes that may restrict operation. Tube handle assembly shall be securely fastened to the tube. Repair/replace as required.

11. Magnet Assembly

The front mounted magnet removes any loose ferromagnetic objects such as nut, bolts, nails, etc. in the path of the sweeper. Trouble shooting guide, parts list, and electrical schematic can be found in Section M, pages M-1 through M-7 of TM-3825-24&P/7. The Magnet Assembly shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix A).

a. TEST PROCEDURES.

(1) Inspect magnet assembly mounting hardware, brackets, drag links, lift assembly, and bearing blocks for proper operation. Inspect these components for damaged, missing or broken components, bending and warpage, and loose fit. Repair/replace as required.

(2) Inspect and test the magnet and its electrical and hydraulic controls for proper operation. Inspect components for damaged, broken or missing components.

(3) Inspect and test the magnet controls contained inside the vehicle cab. Inspect these components for proper operation, damaged or missing components. Inspect and test the magnet height indicator for accuracy. Inspect and test the magnet on/off, raise and lower switch assemblies, and the magnet actuator for proper operation, damage and corrosion. Inspect these devices to assure they are securely mounted in their proper location without damaged, loose, or missing and broken mounting hardware.

(4) Inspect and test the magnet hydraulic controls and system components for proper operation. Inspect hydraulic cylinders, hoses, hydraulic control and lock valves for proper operation, damaged, corrosion, broken or missing components.

b. PASS/FAIL.

(1) Magnet Assembly mounting hardware, brackets, drag links, lift assembly and bearing blocks shall contain no damage, bends, warpage, or missing or broken components. Mounting hardware shall be securely fastened in their proper places with not missing, loose, or broken or damaged components. Repair/replace as required.

(2) Magnet shall work as intended. Repair/replace as required.

(3) Magnet Assembly electrical controls shall function as intended. Magnet on/off, raise and lower switch assemblies shall contain no damage and shall be securely fastened in their proper places. Magnet actuator shall be securely fastened to its proper mount position and function as intended. These electrical devices shall be securely mounted in their proper mounting positions without damaged, loose, missing or broken mounting hardware. Repair/replace as required.

(4) Magnet height indicator assembly shall operate as intended. Assembly shall be securely fastened in its proper mounting location with no damaged. loose, missing or broken mounting hardware. Indicator shall project a reading that is within ½ (.500) inch of actual height from ground to bottom of magnet.

NOTE

The relationship of the magnet assembly to the ground is directly related to tire inflation and tire size. Do not change without proper adjustment compensation.

(5) Hydraulic lift cylinders shall function as designed. Cylinders shall contain no damage that may hinder their proper operation. Cylinders shall be securely fastened in their proper mounting position with no damaged, loose, missing or broken mounting hardware. Repair/replace as required. Metallic hydraulic lines shall contain no flat spots or kinks that may restrict fluid or eventually result in leakage. Nonmetallic hydraulic line shall contain no blisters or deformations to the outer covering. No excessive abrasion or scrubbing areas on outer surface of both metallic or nonmetallic hoses and lines are present. All hydraulic lines and hose mounting hardware (nuts, bolts, washers, clamps, etc.) are securely inplace and none of these items are missing. Hydraulic control and lock valves shall operate as intended with no binding or sticking allowed. Valves shall be securely mounted in their proper position with no damaged, loose, missing or broken mounting hardware.

e. **Power Unit (501758)(John Deere 4239 DL)**

The power unit drives the blower and hydraulic pump. All controls are located inside the truck cab. The engine for the power unit is the John Deere 4239 DL, 4 cylinder diesel powered model. The Power Unit trouble shooting guide and parts list (except basic engine) can be found in Section D pages D-1 through D-4 of TM-3825-24&P/7. The basic engine (John Deere Model 4239 DL) parts list and maintenance procedures are contained in TM-3825-24P/9. The Power Unit shall be IROANed of all deficiencies identified on the Pre-Induction Checklist (Appendix).

1 POWER UNIT ENGINE

a. TEST PROCEDURES.

Prior to initial inspection, always make visual checks to assure normal operating conditions exist (fluid levels are correct, belt tension, etc.). Engine will not be removed from the Runway Sweeper unless major defects are found during the initial inspection, oil analysis and operational testing. If repair is required, remove and repair per technical references in TM-3825-24P/9. Each engine assembly will be IROANed of all reported deficiencies. The engine assembly will be detail cleaned and inspected for loose, damaged, or missing parts. Special emphasis will be in place on mechanical noises which may identify internal engine damage. No unusual vibrations, excessive oil consumption, excessive exhaust smoke, leakage of exhaust gases, exhaust restrictions, loss of coolant, low engine oil pressure or engine overheating are permitted. Engine shall be tested using the Engine System Operation and Test located in TM 3825-24P/9, Group 105.
If engine repair/rebuild is required, remove and repair per technical references shown in TM 3825-24P/9.

b. PASS/FAIL.

The engine shall be complete and contain no loose, damaged, or missing parts. Repaired/Rebuilt engines shall be in compliance with the repair/rebuild procedures for John Deere Model 4239 engine located in TM-3825-24P/9.

2. FUEL SYSTEM

a. TEST PROCEDURES

Test the following. in accordance with TM-3825-24/9 to conform with inspection and testing procedures to assure full conformance with this SOW.

(1) Inspect the fuel supply pump assembly for loose or broken items, cracks, and leaking gaskets.

(2) Inspect the air cleaner indicator for proper function.

(3) Inspect fuel lines for rust, leakage, tight and secured fittings.

(4) Inspect air cleaner assembly for corrosion, missing components (rain cap), damage and leakage.

(5) Replace all fuel, and oil filters 100 percent.

(6) Inspect the engine air intake hose for cracks, foreign material, missing hardware, and proper fit.

b. PASS/FAIL.

(1) Fuel system contains no leaks of any type.

(2) The fuel pump, filters and fuel lines, both metallic and nonmetallic, are securely mounted in their proper places with no missing mounting hardware. Replace metallic fuel lines that contains flat spots or kicks that may restrict fuel flow or eventually result in leakage. Stripped or rounded off fitting are not permitted. Replace nonmetallic fuel lines that contain blisters or deformations to the outer covering. No excessive abrasion or scrubbing areas on outer surface of both the nonmetallic and metallic hoses and lines are present. All fuel lines and hose mounting hardware (nuts, bolts, washers, clamps, etc.) are securely inplace and none of these items are missing. All fuel filters have been replaced 100 per cent.

(3) Replace air indicator if not functioning properly. Replace air filter housing if damage. Replace air filters 100 percent.

(4) Replace cracked or broken air inlet hoses. Replace hose clamps that will not maintain tightness or are stripped out.

(5) Repair/Replace throttle linkage if binding. Replace accelerator control cable if binding or outer cover is damaged.

(6) Replace metallic fuel lines that contains flat spots or kicks that may restrict fuel flow or eventually result in leakage. Replace metallic fuel lines that contains stripped or rounded off fittings. Replace nonmetallic fuel lines that contains blisters or deformities to the outer covering. Replace all hoses and lines that contains excessive abrasion or scrubbing areas on the outer surface of the lines or hoses. All fuel lines and hose mounting hardware (nuts, bolts, and washers).

3. Cooling System.

a. TEST PROCEDURES.

(1) Inspect hose clamps for tightness.

(2) Inspect water inlet manifold for leaks.

(3) Inspect thermostat housing for leaks.

(4) Inspect fan assembly for breaks, bends, and missing rivets. Inspect fan assembly for missing bolts and washers.

(5) Inspect water pump for leaks, cracks, and unusual noise.

(6) Inspect fan shroud for breaks or cracks. Inspect fan shroud for missing mounting hardware (nuts, bolts, washers, and brackets).

b. PASS/FAIL

(1) Replace any hose clamp that shall not remain tight or can not be tighten.

(2) Replace gasket on water inlet manifold if leaking. If manifold is corroded to the extent that the manifold leaks even with a new gasket, replace manifold.

(3) Replace thermostat and thermostat housing gasket 100 percent. Replace all cracked and badly corroded housings.

(4) Replace fan assembly if broken or bent. Replace fan assembly if blades are missing rivets. Replace all miss nuts, bolts, and washers.

(5) Replace fan clutch if unusual noises are detected. Replace all missing nuts, bolts, and washer.

(7) Replace fan shroud if broken or shroud contains crack that, in the Contractor opinion, weakens the shroud to an extent that it may fail. Replace all missing or damaged mounting brackets, nuts, bolt, and washers.

(8) Replace water pump gasket if leaking. Replace water pump if leaks.

(9) Reverse flush, clean, and inspect radiator core 100 percent. Straighten bent fins that can be straighten. Test radiator for pressurization. Radiator shall hold 15 PSI for three minutes without evidence of leakage or structural failure.

(10) Replace coolant. Antifreeze protection shall be to a temperature of -20 degrees Fahrenheit.

Procedures for repair/replacement can be found in TM-3825-24P/9.

4. ELECTRICAL SYSTEM

All Runway Sweepers for IROAN shall have batteries installed

a. TEST PROCEDURES Inspect all wiring harness, battery cables, NATO slave receptacle, and ripped or torn insulation and tie wraps.

(1) Test the alternator and starter motor as per test procedures in TM-3825-24P/9.

(2) Inspect and test engine oil and water temperature gauges for proper operation. Inspect gauges to assure gauges can be read from inside vehicle cab.

b. PASS/FAIL

(1) Repair of insulation less than four inches in length may be accomplished by using electrical tape. Corrosion shall be removed from components. Upon removal of corrosion, if component do not function properly, replace component. Replace all damaged battery cables. Replace any missing or damaged wire ties and wraps.

(2) Repair/Replace alternator and starter motor that does not pass test identified in TM-3825-24/5 VOL 1. Install new hot batteries for Runway Sweeper identified for immediate shipment and new dry batteries for Runway Sweepers identified for storage.

(3) Replace any gauge or switch that do not function property. Replace gauges only after assurance that gauge sending unit is not defective. Replace gauges if gauge can not be easily read from vehicle cab.

5. POWER UNIT POWER TAKE OFF (P.T.O.) ASSEMBLY

a. TEST PROCEDURES.

(1) The P.T.O. assembly will be detail cleaned and inspected for loose, damaged, or missing parts. Special emphasis will be in place on mechanical noises which may identify internal P.T.O. damage. No unusual vibrations are permitted.

(2) Inspect and test P.T.O. shaft for excess vertical and horizonal end play at the drive sheave end.

b. PASS/FAIL.

(1) The P.T.O. Assembly shall contain not missing, broken or loose mounting hardware or brackets. P.T.O. shall operate as intended with no unusual mechanical noises or vibrations. Repair/Replace P.T.O. assembly as required.

(2) P.T.O. shaft shall contain not unusual amount of end play. There are no specification listed in TM 3825-24&P/7 for end play allowances. Therefore, excess amount of end play shall be determined by the Contractor. Repair/Replaced as required. If P.T.O. requires repair/replacement based on Contractors estimate that end play is excessive, end play measurements shall be documented on the Pre-Induction Checklist.

3.3.3 **PHASE III - INSPECTION, TESTING AND ACCEPTANCE.**

a. Inspection, testing and acceptance of the Runway Sweeper shall be conducted in accordance with provisions of this SOW.

b. The Contractor shall be responsible for conducting required tests and shall ensure all necessary personnel are available to complete the Runway Sweeper Final Inspection Report (Section 4, Para 4.2). Acceptance tests shall be held at the Contractor. The Weapon System Manager and/or their representatives shall be given a minimum of two weeks notice prior to beginning acceptance testing. The test area shall be set up with all safety consideration incorporated (test area clearly defined, limit access. to unauthorized vehicle and foot traffic, etc.).

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. The Weapon System Manager and/or their representatives may require the Contractor to report tests or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

d. Acceptance testing on all Runway Sweepers repaired under the provisions of this SOW shall be accomplished in accordance Appendix B of this SOW.

e. Vehicle Markings. Registration numbers and other markings shall be applied in accordance with MIL-STD- 129N.

f. Instruction Plates. The Runway Sweeper shall be equipped with instruction plates suitably located, describing any special or important procedures to be followed in operating and servicing the equipment. Plates shall be of a material which will last and remain legible for the life of the equipment, and shall be securely affixed thereto with nonferrous screws, rivets or bolts of not less than 1/8 inch diameter. The battery box top cover (PN 501992) shall have affixed in the location identified in Appendix (C), a **CAUTION DECAL** identifying the vehicle power system as being **12 Volts DC**. Decal shall be as per Appendix (C) (MARCORLOGBASE Albany part number 845020A0000(1984)).

g. RECORD JACKET: All major equipment or components serial numbers that are replaced during the IROAN are to be identified by the Contractor for entry in the record jacket of the Runway Sweeper.
Information will list the Runway Sweeper serial number, Name of equipment/component(s) replaced, serial number of deficiency equipment/component(s), serial number of replacement equipment/component(s), and if the equipment/component(s) is new or rebuilt.

h. DATA PLATES AND DECALS. Each repaired Runway Sweeper shall have an IROAN data plate affixed next to the existing Runway Sweeper data plate after Runway Sweeper has completed the rebuild cycle. The data plate shall meet the requirements of MIL-STD-130 and TM 4750-15/2. The IROAN data plate shall contain the following information:

RUNWAY SWEEPER SERIAL NO._____
REPAIRED IN ACCORDANCE WITH IROAN SOW 01-837-2-09199A-2/1 .
REPAIR FACILITY_____
DATE_____.
TRUCK SPEEDOMETER READING AT TIME OF IROAN_____.
SWEEPER POWER UNIT HOUR READING AT TIME OF IROAN_____.

3.3.4 PHASE IV - PACKAGING, HANDLING, STORAGE, AND TRANSPORTATION (PHS&T).

a. The Contactor shall be responsible for preservation and packaging of items being repaired under the terms of this statement of work. Items being prepared for long term storage shall be in accordance with the level A requirements of ATPD 2241. Items scheduled for domestic shipment, immediate use or overseas shipment with exception of Maritime Prepositioned Forces (MPF), shall be level B, Drive-on/Drive-off. Items being prepared for overseas shipment shall have a label affixed which reads, "NOT FOR WEATHER DECK STOWAGE." Items scheduled for shipment to MPS shall be Level B, MPS Modified Drive Away.

b. The Terms Drive-on/Drive-off and MPF Modified Drive Away are defined as follows:

Drive-on/Drive-off: Batteries will be hot and disconnected from vehicle electrical system. Terminals and leads will be taped. Fuel tanks will be filled ¼ full. The air intake system, exhaust and brake systems, drive-train and gauges are to be depreserved.

MPF Modified Drive Away: Batteries shall be hot and connected to the vehicle electrical system. Fuel tank shall be filled ¾ full of JP5. The air intake system, exhaust and brake systems, drive-train and gauges are to be depreserved. Fire extinguisher bracket and seats (all) shall be installed.

c. Marking shall be in accordance with MIL-STD-129N.

d. The Marine Corps will provide the contractor with shipping address(es) for delivery of repaired equipment. The Contractor shall be responsible for arranging for shippment to the pre-designed site(s). The Marine Corps will be responsible for transportation costs associated with shipping the subject equipment to and from the contractor.

3.4 **CONFIGURATION MANAGEMENT**

3.4.1 **CONFIGURATION STATUS ACCOUNTING (CSA).**

a. Using MIL-STD-973, (paragraph 5.5.8) as a guide, the Contractor shall record and submit data on retrofit accomplished during Phase II. The following approved Modification Instruction (MIs) and Technical Instructions (TIs) shall be applied during Phase II of the IROAN process:

b. The Contractor shall determine the application status of approved configuration changes by visual inspection to the extent possible. The Weapon System Manager, MARCORLOGBASES Albany, Code 837-2 will identify the configuration changes to be inspected by furnishing a Configuration Inspection Checklist to the Contractor. The Contractor shall use one checklist for the Runway Sweeper to record the inspection findings along with other required data.

c The Contractor shall record serial numbers of the assemblies listed on the Configuration Inspection Checklist. The Contractor shall record the information on the same form that was used to record the application status of configuration changes.

d. There are no current MIs or TIs for the Runway Sweeper. A Configuration Checklist will not be required under the provision of this SOW.

3.4.2 **CONFIGURATION CONTROL.** The contractor shall apply configuration control procedures to established configuration items. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without receiving prior written authorization. The baseline configuration has been defined by the written procedures or material contained in manuals, standards, instructions or engineering drawings. If it is necessary to depart from the authorized configuration baseline, the contractor shall submit a Request for Deviation or Request for Waiver using MIL-STD-973 (paragraph 5.4.3 or 5.4.4 and Appendix E) as a guide.

3.5 **GOVERNMENT FURNISHED EQUIPMENT(GFE)ACCOUNTABILITY/ GOVERNMENT FURNISHED MATERIEL (GFM).**

GFE is government owned equipment authorized by contract for use by a commercial/government contractor. It is neither consumed during production nor incorporated into any product. GFM is materiel furnished to a contractor that will be consumed during the course of production or incorporated into product being manufactured/remanufactured under a contract/ statement of work. In the event the Marine Corps does have GFE/GFM requirements, the Management Control Activity (MCA/Code 827-2), Marine Corps Logistics Bases, Albany, Georgia, will coordinate required GFE and will maintain a central control on Marine Corps assets in the Contractor's possession. The MCA will forward a GFE Accountability agreement to the Contractor Facility for signature to establish a chain of custody and property responsibilities for Marine Corps assets. The Contractor shall report receipt of all GFM and report consumption of GFM to the MCA.

3.6 **CONTRACTOR FURNISHED MATERIEL (CFM).** The Marine Corps has adopted the Navy's procedures regarding Contractor Furnished Materiel (NAVICPINST 4491.2A). In the event that Contractor Furnished Materiel is required for repair parts, the contractor shall requisition

through the DOD Supply System. DOD 4000.25-1-M, (MILSTRIP) Chapter 11 authorizes contractors to requisition through the DOD Supply System.

3.7 QUALITY ASSURANCE PROVISIONS

a. The Contractor shall have in place a Quality System that meets the requirements of ANSI/ISO/ASQC Q9002-1994, Quality Systems. The Contractor work shall be subject to in-process review and inspections for compliance of the Quality System by the Weapon System Manager and/or their representatives during contract performance. Inspection may be accomplished at any work location. Authorized Weapon System Manager representatives shall be permitted to observe the work/task accomplishment or to conduct inspections at all reasonable hours. Acceptance tests shall be held in-plant. Inspection by Weapon System Manager and/or their representatives of all acceptance tests plans, materials and associated lists furnished hereunder does not relieve the Contractor from any responsibility regarding defects or other failures to meet contract requirements which may be disclosed prior to final acceptance.

b. Noncompliance with procedures resulting in degraded quality of work may result in a stop-work order requiring action the Contractor to correct the work performed and to enforce compliance with quality assurance procedures or face contract termination. Notwithstanding such Weapon System Manager and/or their representatives inspection it shall be the Contractor responsibility to ensure that the entire system meets the performance requirements delineated and addressed in the TM-3825-24&P/7. Quality assurance operations performed by the Contractor shall be subject to the Weapon System Manager and/or their representatives verification at any time. The Weapon System Manager and/or their representatives verifications can include, but shall not be limited in any matter, to the following:

(1) Inspection of materials, products, assemblies, and documentation to assess compliance with quality standards.

(2) Surveillance of operations to determine that quality assurance, practices, methods, and procedures are being properly applied.

(3) Inspections of deliverable products to assure compliance with all requirements of the Runway Sweeper, this SOW, and applicable documents used herein.

(4) Failure of the Contractor to promptly correct deficiencies discovered, shall be a reason for suspension of acceptance until corrective action has been made.

3.8 ACCEPTANCE

The performance of the Contractor and the quality of work delivered, including all equipment furnished and documentation written or compiled, shall be subject to in-process review and inspection during performance. Inspection may be accomplished in-plant or at any work site or location, and Marine Corps Weapon System Manager, Life Cycle Management Center, MARCORLOGBASES, Code 837-2, Albany , Ga. and/or their representatives shall be permitted to observe the work or to conduct inspection at all reasonable hours within the repair facilities normal

working hours. Final inspection and acceptance testing shall be conducted at the Contractor. Finally acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

The Contractor will be responsible for deficiencies identified through the PQDR program for the first time issue of Runway Sweeper IROANed under the provisions of this SOW. Deficiencies must identify IROAN related problems to qualify under the provisions of this SOW..

NOTE: First Time Issue is defined as the first time issue (after IROAN) of an item from stock to fill a valid requisition or requirement.

3.9 **REJECTION**

Failure to comply with any of the specified requirements listed herein shall be reason for rejection by Marine Corps Weapon System Manager, Life Cycle Management Center, Code 837-2, MARCORLOGBASES Albany, Ga. and/or their Representative. The Contractor shall, at no additional cost to Life Cycle Management Center, Code 837-2, MARCORLOGBASES, Albany, Ga., provide the following:

a. Develop an approach for modification or correction of all deficiencies.

b. On approval of a documented approach, the Contractor shall correct the deficiencies and repeat verification until acceptable compliance with acceptance test procedures is demonstrated.

4.0 **REPORTS**

4.1 Runway Sweeper Pre-Induction checklist. The Contractor shall complete the Runway Sweeper Pre-induction checklist for each Runway Sweeper repaired. These documents shall be available during final acceptance testing. One copy of each document shall be provided to the Life Cycle Management Center, Code 837-2, MARCORLOGBASES Albany, Georgia, after final acceptance of the Runway Sweeper.

4.2 Runway Sweeper Final Inspection Report. The Contractor shall provide one copy, per vehicle, of the Runway Sweeper Final Inspection Report (Appendix B of this IROAN SOW). These inspection reports shall be available for review during the final acceptance testing and one copy shall be sent to Marine Corps Weapon System Manager, Life Cycle Management Center, Code 837-2, MARCORLOGBASES, Albany, Ga. upon acceptance of vehicle.

IROAN
PRE-INDUCTION CHECKLIST
FOR
SELF-PROPELLED VACUUM CLEANER
(RUNWAY SWEEPER)

DATE:_____

USMC NO._____
MILES_____

JOB ORDER NO._____
HOURS_____

PRODUCTION NO._____

HULL NO._____ SERIAL NO._____

ENGINE NO. _____

TRANSMISSION NO.
_____

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=
INSPECTOR'S NAME BADGE NUMBER

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=
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NOTE: The following inspection sheets are divided into seven columns. The inspector will place a check in the column which best describes the condition of the item being inspected, for those items that cannot be inspected for any reason, the inspector will make an appropriate annotation in the remarks column. The remarks column may also be used to identify levels and type of repairs required. If the inspector finds a defect that could cause injury to the operator or damage to the vehicle, testing will cease until the defect is corrected or the decision is made to induct the Runway Sweeper into the shop.

These inspection sheets are to be used to annotate deficiencies identified during the Pre-Induction Phase of SOW-01-837-2-09199A-2/1.

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SELF-PROPELLED VACUUM CLEANER (RUNWAY SWEEPER) IF NOT APPLICABLE MARK N/A IN REMARKS BOX	SAT	MISSING	SERVICE	ADJUST	REPAIR	REPLACE	UNSAT	REMARKS	INSPECT
TRUCK,INTERNATION MODEL S-1654B									
1. Engine Assembly a. Inspect engine for missing, loose, damage, or missing parts. b. Inspect and test engine condition using the Engine Diagnostic Test Procedure in TM 3825-24/6. c. Inspect and test engine throttle cable and linkage for serviceability.									
2. Fuel Injection Lines a. Inspect lines for serviceability. Note broken or missing parts, rust and corrosion. b. Mounting**:** Inspect for missing, loose, or broken clamps and bolts.									
3. Fuel Supply Pump a. Inspect pump assembly for loose or broken items, cracks, and leaking gaskets. b. Mounting: Inspect for missing, loose, or broken, screws, washers, and nuts.									
4. Fuel Filters Inspect filters and filter housings for leakage. Replace filters 100 per cent. Mounting: Inspect for missing, broken, or loose									

screws, washers, nuts, and filter housing.									
5. Fuel Supply Lines from vehicle tank. a. Inspect for serviceability. Note broken missing, or loose parts, rust or corrosion.									
6. Engine Air Cleaner a. Inspect air cleaner assembly for serviceability. Replace air filters 100 per cent. b. Inspect air cleaner indictor for serviceability. c. Inspect air inlet hose assembly for serviceability. d. Mounting: Inspect for missing screws, washers, nuts, and clamps. e. Note broken. loose or missing parts, rust or corrosion.									
7. Water Separator/Filter a. Inspect water separator/filter for serviceability. Replace filter 100 per cent. b. Mounting: Inspect for missing screws, washers, and nuts. c. Note broken, loose, or missing parts, rust or corrosion.									
8. Engine Coolant Lines a. Inspect hose clamps for tightness. b. Inspect water hoses for serviceability. □									
9. Deaeration Tank a. Inspect tank for proper									

coolant level. b. Inspect tank for leakage. c. Note broken, loose, or missing parts, rust or corrosion. d. Mounting: Inspect screws, washers, nuts, and brackets for loose, missing, or broken components.									
10. Cooling Fan Assembly a. Inspect fan assembly for breaks, bends, and missing rivets. b. Inspect fan assembly for missing bolts and washers. c. Inspect fan clutch assembly for proper operation. d. Note broken, loose, or missing parts, rust or corrosion.									
11. Radiator a. Inspect radiator for serviceability. b, Inspect radiator shroud for serviceability. c. Mounting: Inspect screws, nuts, and washers for missing, loose, and damage components. □									
12. Electrical Starting Motor a. Inspect starting motor with procedures contained in TM 3825/5. b. Note broken, loose, or missing parts, rust or									

corrosion. c. Mounting: Inspect for loose, missing, or broken mounting hardware.									
13. Alternator a. Inspect alternator with procedures contained in TM 3825-24/5. b. Note broken, loose, or missing parts, rust or corrosion. c. Mounting: Inspect for loose, missing, or broken mounting hardware.									
14. Fan and Alternator Belts a. Replace fan and alternator belts 100 per cent. b. Inspect belt adjustment									
15. Transmission. a. Check operation of transmission by driving vehicle in forward and reverse gears. b. After operation test, inspect transmission for overhearing and leaks. c. Inspect transmission for cracks, leaks, damage. d. Check shift cable for kinks and excessive play. e. Inspect transmission oil pan bolts for looseness. f. Inspect out put shaft seal for damage and/or leaks. **Transmission (Cont.)** g. Inspect transmission fluid level for correct level. h. Mounting: Inspect for loose, missing, and broken mounting hardware. I. Inspect transmission oil cooler lines for serviceability, j. Note missing or broken parts, rust or corrosion.									

16. Vehicle Brakes a. Inspect brake pads and rotors for grooves and uneven wear. b. Inspect hydraulic lines and hoses for breaks, cracks, and leaks. c. Note missing or broken parts, rust or corrosion. d. Mounting: Inspect for loose, missing, or damaged mounting hardware.									
17. Parking/Hand Brake a. Inspect and test parking brake operation. b. Inspect brake lining and drake drum for grooves and uneven wear. c. Inspect parking brake indicator assembly for proper operation. d. Mounting: Inspect for loose, missing, or damage mounting hardware. e. Note missing or broken parts, rust or corrosion.									
18. Hydro-Max Brake Booster System a. Inspect master cylinder and hydraulic pump assembly fluid level . b. Inspect system for leakage. **Hydro-Max Brake Booster System (Cont.).** c. Inspect hydraulic lines and hoses for cracks, breaks, and leakage. d. Inspect reserve power system operation. e. Inspect booster unit housing assembly for leaks, cracks, missing hardware, loose fit to vehicle firewall. f. Note any missing or broken parts, rush or corrosion.									

19. Front Axle a. Inspect front I Beam axle for stress cracks and abnormal bending. b. Inspect kingpins for looseness. c. Inspect tie rod ends for looseness. d. Inspect drag links for looseness. e. Inspect front wheel alignment. f. Inspect leaf springs, spring hangers, U-Bolts, and U-Bolt seats for damage, loose, and broken components. g. Mounting: Inspect for loose, missing, or broken mounting hardware. h. Note missing or broken parts, rust or corrosion.									
20. Rear Axle a. Inspect yoke seal, wheel bearing seals, carrier seals, and pinion housing seals for leakage. b. Inspect and test rear axle assembly to assure axle operates without **Rear Axle (Cont.).** unusual mechanical noises or vibrations which may identify internal axle damage or axles requiring internal adjustments. c. Inspect leaf springs, spring hangers, U-bolts, and U-bolt seats for loose, damage, corrosion, and missing components. d. Inspect lubrication level.									
21. Shock Absorbers. a. Inspect front and rear for oil leaks or damage. Inspect shock absorber rubber bushings for cracks,									

dry rotting damage or looseness. NOTE location of defective item in REMARKS column.									
22. Propeller Shaft. a. Inspect propeller shaft output and input end yokes at both the transmission and axle for looseness, damage, and missing components. b. Inspect slip yoke for excessive radial movement. c. Inspect propeller shaft for missing balance weights, damage or bent tubing. d. Inspect center bearing for loose mounting bolts, deteriorated or oil soaked center bearing.									
23. Tires. a. Inspect all tires for cuts, gouges, cracks, and serviceability. NOTE location of defective tires in REMARKS column.									
24. Wheels a. Inspect all wheels for broken, cracked, or bent surfaces. Ensure that the side ring and clamp plate is serviceable and fit securely in their grooves. NOTE location of defective wheels in REMARKS column.									
25. Wheel Studs and Nuts a. Check all wheel studs and nuts for serviceability and inspect for missing nuts. NOTE location of defective items in REMARKS column.									

27. Exhaust System. a. Inspect exhaust system pipes, muffler, and tail pipe for corrosion, leaks, holes, and serviceability. b. Inspect exhaust mounting system for loose, missing, or damage brackets, clamps, U-bolts, and spacers.									
28. Vehicle Frame. a. Visually inspect frame, cross members and under body for bends, broken welds, and corrosion. □									
29. Vehicle Cab Assembly a. Inspect for serviceability. Note broken, loose, or missing parts, rust or corrosion.									
30. Cab Doors. a. Inspect for damage, misalignment, rust or corrosion. Ensure all seals and doors are serviceable.									
31. Cab Mounts. a. Inspect for loose or broken welds and rusted conditions.									
32. Fender and Hood. a. Inspect for loose mounting bolts, distortion, wear and cracks. b. Inspect hold down straps for serviceability and missing straps. c. Inspect mirrors and mirror brackets for serviceability.									
33. Vehicle Glass.									

a. Inspect all glass for distortion, wear, cracks, and pitting. b. Inspect glass for loose fit and leakage.									
34. Headlights. a. Inspect for loose mounting hardware, loose electrical connection, and damage. Ensure serviceability. □									
35. Lights. Inspect the following lights for loose mounting hardware, loose electrical connections, burned out bulbs, or broken lens and fixtures. Note location in REMARKS column.									
a. Clearance lights.									
b. Interior lights.									
c. Work lights.									
d. Tail/Stop lights Turn indicator lights.									
e. Strobe light.									
SWEEPER UNIT TYMCO MODEL 600									
1. Hopper Assembly a. Inspect hopper inspection doors and door seals for serviceability. Inspect for loose. missing or broken mounting hardware. b. Inspect hopper transition ducts and duct seals for serviceability. Inspect for loose. missing or broken mounting hardware. c. Inspect rear dump door and door seals for									

serviceability Inspect for loose. missing or broken mounting hardware. d. Inspect rear dump door toggle switch assembly for damage and proper operation. Inspect switch guard for damage and missing mounting screws. e. Inspect inner hopper screen and chip seal for serviceability. Inspect for **HOPPER ASSY (Cont.)** loose. missing or broken mounting hardware. f. Inspect the hopper hull assembly for holes, and missing hardware. Note missing and damaged parts, rust or corrosion.									
2.BLOWER ASSEMBLY a. Inspect blower assembly for unusual noise/vibration and proper operation. Inspect for loose. missing or broken mounting hardware. b. Inspect blower assembly bearings for overheating. Inspect for loose. missing or broken mounting hardware. c. Inspect blower pulleys for damage and looseness. d. Inspect drive belt housing and guards for serviceability. Inspect for loose. missing or broken mounting hardware.									
3. PICK-UP HEAD ASSY a. Inspect pressure/suction hoses for serviceability. b. Inspect skid plates for wear and proper adjustment. Inspect for loose. missing or broken mounting hardware. c. Inspect pick-up head curtains for serviceability. Inspect for loose. missing or									

broken mounting hardware. d. Inspect blast orifice for damage and proper operation. **PICK-UP HEAD ASSY (CONT.)** e. Inspect center debris deflector for serviceability. f. Inspect up-stop assemblies, pick-up head lift cylinders, lift chain assemblies,springs and drag links for serviceability. Inspect for loose. missing or broken mounting hardware, rust or corrosion.									
4. GUTTER BROOM ASSEMBLY a. Inspect gutter broom down pressure, broom angle, shoulder plate, and broom cylinder for serviceability. Inspect for loose. missing or broken mounting hardware. b. Inspect broom assembly spring for proper adjustment, wear and/or breakage. c. Inspect hydraulic motor for proper operation and leakage. d. Inspect all hydraulic hoses and lines for serviceability. e. Inspect boom hydraulic control valves for serviceability. f. Inspect broom boom assembly for loose. missing or broken mounting hardware, rust or corrosion. □									
5.HOPPER ASSEMBLY									

HYDRAULIC SYSTEM a. Inspect hydraulic tank for serviceability. Inspect filler cap for correct fit and water tightness. Inspect for loose. missing or broken mounting hardware. b. Replace hydraulic filter per cent. c. Inspect hydraulic pump for serviceability. Inspect/test pump for overheating, unusual noise, and poor performance. d. Inspect/test oil cooler for serviceability. e. Inspect hydraulic control valve bank for serviceability. Test each control valve operation. f. Test gutter broom, pick-up head, and rear dump door hydraulic cylinders for serviceability. g. Inspect hydraulic cylinders, hydraulic hoses and lines for leakage. Inspect for loose. missing or broken mounting hardware, rust or corrosion.									
6. WATER SYSTEM a. Inspect water tank for serviceability. Inspect for loose. missing or broken mounting hardware, rust or corrosion. b. Inspect suction filtration strainers for serviceability. c. Inspect the low pressure pump for serviceability. **WATER SYSTEM (Cont)** Inspect for loose. missing or broken mounting hardware. d. Inspect water pump electrical connections,									

wiring harness, switches and relays for proper operation, loose. missing or broken hardware. e. Inspect water manifold for leaks, damage, corrosion, and missing components. f. Test all electrical operated valves and their control switches located on the operators control panel inside the truck cab. g. Test all pressure switches and low water warning lights. h. Inspect and test all spray nozzles located on the pick-up head and the gutter broom assemblies. I. Inspect all water hoses, lines for serviceability.									
7. FUEL SYSTEM a. Inspect fuel tank for serviceability. Inspect for loose. missing or broken mounting hardware, rust or corrosion. b. Inspect auxiliary engine and truck engine fuel supply and return lines for serviceability, leakage, loose, missing or broken mounting hardware. c. Inspect fuel tank send unit and gauge for proper operation.									
8. CONTROL SYSTEM Inspect and test for serviceability the following systems.									
a. Washer warning and low pressure lights									
b. All switches (both keyed and toggled), push buttons									
c. Engine gauges/sending									

units									
d. Throttle cable/leaf pressure bleeder cable									
e. fuse panel									
f. electrical wiring harness									
g. Battery box, NATO slaving receptacle, and battery cables									
9. DUAL STEERING a. Inspect steering wheels for serviceability. b. Inspect left and right side steering brackets, mounting hardware,covers,plates, and housing for loose. missing or broken parts and mounting hardware, rust or corrosion. c. Inspect the steering shafts, yoke assemblies, steering shaft gears, set collars, and support brackets for loose. missing or broken parts and mounting hardware, rust or corrosion. d. Inspect and test dual steering function from both sides of cab. e. Inspect and test turn and hazard light switches. □									
10. AUXILIARY HAND HOSE ASSEMBLY a. Inspect hand hose assembly hose, hose clamps and pick-up tube for serviceability. Inspect for loose. missing or broken parts and mounting hardware. b. Inspect hand hose assembly mounting brackets, straps, boom assembly, hose door and inspection door for loose. missing or broken parts and									

mounting hardware.									
11. MAGNET ASSEMBLY a. Inspect assembly for loose. missing or broken parts and mounting hardware, rust and corrosion. b. Inspect and test magnet and its electrical and hydraulic controls for proper operation, damage, leakage, broken and damaged parts. c. Inspect hydraulic hoses and lines for serviceability.									
POWER UNIT JOHN DEERE 4239L									
1. POWER UNIT ENGINE a. Inspect engine assembly for loose, missing parts and components. Inspect and test engine for unusual mechanical noises which may identify internal engine damage, unusual vibrations, excessive oil consumption, excessive exhaust smoke, leakage of exhaust gases, lost of coolant, low oil pressure and overheating. b. Test engine using the Engine System Operation and Test procedures in TM 3825-24/9.									
2. FUEL SYSTEM a. Inspect for serviceability the fuel supply pump, air cleaner indicator, fuel lines and hoses, air cleaner assembly ,and air intake hose. Inspect for loose. missing or broken parts and mounting hardware, rust or corrosion. b. Replace air, oil, and fuel filters 100 per cent.									

3. COOLING SYSTEM a. Inspect for serviceability and leakage all hoses and hose clamps, water pump, fan and fan shroud. Inspect for loose, missing or broken parts and mounting hardware, rust and corrosion.									
4. ELECTRICAL SYSTEM. a. Inspect all wiring harness, and battery cables for serviceability. b. Inspect and test engine oil pressure and water temperature gauges. c. Test alternator and starter motor using procedures in TM 3825-24/9.									

FINAL INSPECT CHECKLIST

All safety checks must be satisfactorily completed prior to final inspection. If necessary, before performing tests and checks, wipe down components where grease, oil, or dirt could possibly form. Engine(s) and transmission shall be at normal operating temperatures.

SELF-PROPELLED VACUUM CLEANER (RUNWAY SWEEPER) INSPECT/TEST THE FOLLOWING ITEMS FOR COMPLIANCE TO SOW	**SATFY**	**MISSING**	**SERVICE**	**ADJUST**	**REPAIR**	**REPLACE**	**UNSAT □**	**REMARKS**
TRUCK, INTERNATIONAL MODEL S-1654B								
1. ENGINE ASSEMBLY a. Engine functions in accordance with standards of the Engine Diagnostic Test. b. Engine is complete with no missing, damaged or loose components. c. Engine throttle cable and linkage performs as intended. **Engine shall be free of deficiencies identified in Appendix A.**								
2. FUEL INJECTION LINES Fuel injection lines are serviceable and securely mounted in their proper position with no leakage.								
3. FUEL SUPPLY PUMP Fuel pump functions as intended and is securely mounted in its proper position with no leakage.								
4. FUEL FILTERS Fuel filters replaced 100 per cent.								
5. FUEL SUPPLY LINES FROM VEHICLE TANK Fuel lines are serviceable and is securely mounted in their proper position. □								
6. ENGINE AIR CLEANER a. Air filters replaced 100 per cent. b. Air cleaner indicator functions as intended.								

c. Air intake hose and air cleaner assembly are serviceable and complete with no missing parts or components.								
7. WATER SEPARATOR/FILTER a. Filter replaced 100 per cent. b. Filter assembly functions as intended with no loose, missing, or damaged parts.								
8. ENGINE COOLANT LINES Water hoses and lines are serviceable with no missing or loose hose clamps.								
9. DEAERATION TANK a. Fluid level is at correct level. b. Tank is securely mounted it proper location with no loose, missing, or damage parts.								
10. COOLING FAN ASSEMBLY a. Fan clutch functions as intended. b. Fan is securely mounted in its proper position with no missing or loose parts.								
11. RADIATOR a. Radiator is serviceable and is securely mounted in it position with no missing or loose hardware. b. Radiator fan shroud is securely mounted it its proper position with no missing or loose parts.								
12. ELECTRICAL STARTING MOTOR AND ALTERNATOR Starter and alternator functions as intended with no missing or loose parts.								
13. FAN AND ALTERNATOR BELTS Fan and alternator belts replaced 100 per cent.□								
14. TRANSMISSION a. Transmission operates as intended with no slippage or overheating. b. Transmission contains no cracks, leaks, or damage. c. Shift cable functions as intended. d. Fluid level is at correct level. **Transmission is free of deficiencies identified in Appendix A.**								
15. VEHICLE BRAKES								

a. Brake pads lining exceeds 4.76mm (3/16 in) wear limit. b. Brake pads and rotors are free of grooves, uneven wear, missing, or loose parts. c. Hydraulic hoses and lines are serviceable and is securely mounted in their proper place.								
16. PARKING/HAND BRAKE a. Hand/Parking brake functions as intended with no missing or loose parts. b. Parking brake indicator functions as intended.								
17. HYDRO-MAX BRAKE BOOSTER SYSTEM a. Fluid level is at correct level. b. Reserve power system functions as intended with no leaks. missing, or loose parts and components. c. Booster unit contains no leaks, cracks, missing hardware and in securely mounted in its correct mounting position. **Booster System is free of deficiencies identified in Appendix A.** □								
18. FRONT AXLE a. Axle kingpins, tie rod ends, and drag links are free of deficiencies identified in Appendix A. b. Leaf springs, spring hangers, U bolts, U bolt seats are securely mounted with no missing loose parts.								
19. REAR AXLE a. Yoke seal, wheel bearing seal, carrier seal, and pinion seals contain no leakage greater than Class I. b. Axle operates without unusual noises and vibrations. c. Leaf springs, spring hangers, U bolts, and U-bolt seats are securely mounted with no missing or loose								

parts.								
20. SHOCK ABSORBERS a. Shock absorbers are free of leakage. b. Rubber bushing are free of damage, dry rot, and cracks. No rubber bushing are missing.								
21. PROPELLER SHAFT a. Propeller shaft is free of deficiencies identified in Appendix A.								
22. TIRES a. All tires are free of cuts, gouges, and cracks. b. Tires are matched evenly by wear on front and rear axles.								
23. WHEELS a. All wheels are free of breakage, cracks, or bent surfaces. Side ring and clamp plates fit securely in their grooves.								
24. WHEEL STUDS AND NUTS a. Wheel studs and nuts are securely mounted in their correct position, with no missing or striped studs or huts. □								
25. EXHAUST SYSTEM a. Exhaust system pipes, muffler, and tail pipe is free of corrosion, leaks, and holes. b. Exhaust system components are securely mounted in their correct position with no missing or loose parts.								
26. VEHICLE FRAME a. Vehicle frame is free of missing, damaged, bent or broken frame/crossmembers. b. Vehicle frame has been treated for corrosion.								
27. VEHICLE CAB ASSEMBLY a. Vehicle cab is serviceable without missing, loose, or missing parts, rust or corrosion.								
28. CAB DOORS a. Doors are free of damage. Doors are aligned and opens and closes as								

intended. All door and door glass seals are serviceable with out leakage.								
29. CAB MOUNTS a. Mounts contain no loose or broken welds and rusted conditions.								
30. FENDER AND HOOD a. Hood assembly hold down straps are properly mounted and functional. b. Mirror brackets and mirrors are property installed and functional. c. Fender and Hood Assembly contains no loose, missing, or damage mounting hardware and there is no distortion, cracks or worn through areas in the fiberglass assembly.								
31. VEHICLE GLASS a. Vehicle glass is free of distortions, cracks, and pitting. b. Glass is securely mounted in its proper place with no leakage. □								
32. HEADLIGHTS a. Headlights are securely mounted in their place with no loose, missing or damage hardware. b. Lights are property aligned. c. Both the low/high side of the bulbs functions are intended.								
33. VEHICLE LIGHTS The following lights are free of loose, missing or broken mounting hardware. All light bulbs functions as intended, lens and light fixtures are not broken.								
a. Clearance lights								
b. Interior Lights								
c. Work Lights								
d. Tail/Stop Lights Turn indicator lights								
e. Strobe Light								
SWEEPER UNIT **TYMCO MODEL 600**								
1. HOPPER ASSEMBLY a. Hopper inspection doors contain no missing, loose, or damage mounting hardware and all door seals are								

functional with no leakage. b. Hopper transition ducts contain no loose, missing or damage mounting hardware and all duct seals function as intended without leakage. c. Rear dump door is serviceable and without door seal leakage. d. Rear dump door toggle switch assembly operates as intended and is without damage. e. Inner hopper chip seal contains no missing or loose mounting hardware. f. Hopper assembly hull does not contain any holes or missing hardware. Hull has been treated inside and outside for rust or corrosion. □								
2. BLOWER ASSEMBLY a. Blower assembly function without unusual noise or vibration. b. Blower assembly bearings operates as intended without overheating. c. Blower pulleys are functional and securely mounted in its proper place. d. Drive belts are functional. Belt guards are securely mounted in their proper place with no loose, missing, or damaged mounting hardware.								
3. PICK-UP HEAD ASSEMBLY a. Pressure suction hoses are serviceable without holes or tears. b. Skid plates are adjusted correctly and are serviceable. Skid plate is securely mounted to head assembly. c. Pick-up head curtains are serviceable and are securely mounted in their proper positions. d. Blast orifice is at correct adjustment and is free of damage. e. Center debris deflector is serviceable and installed in its proper position. f. Up-Stop assembly, pick-up head hydraulic cylinders, lift chains, springs and drag links are installed in their proper position and functions as intended. Components contain no loose, missing, or damaged mounting								

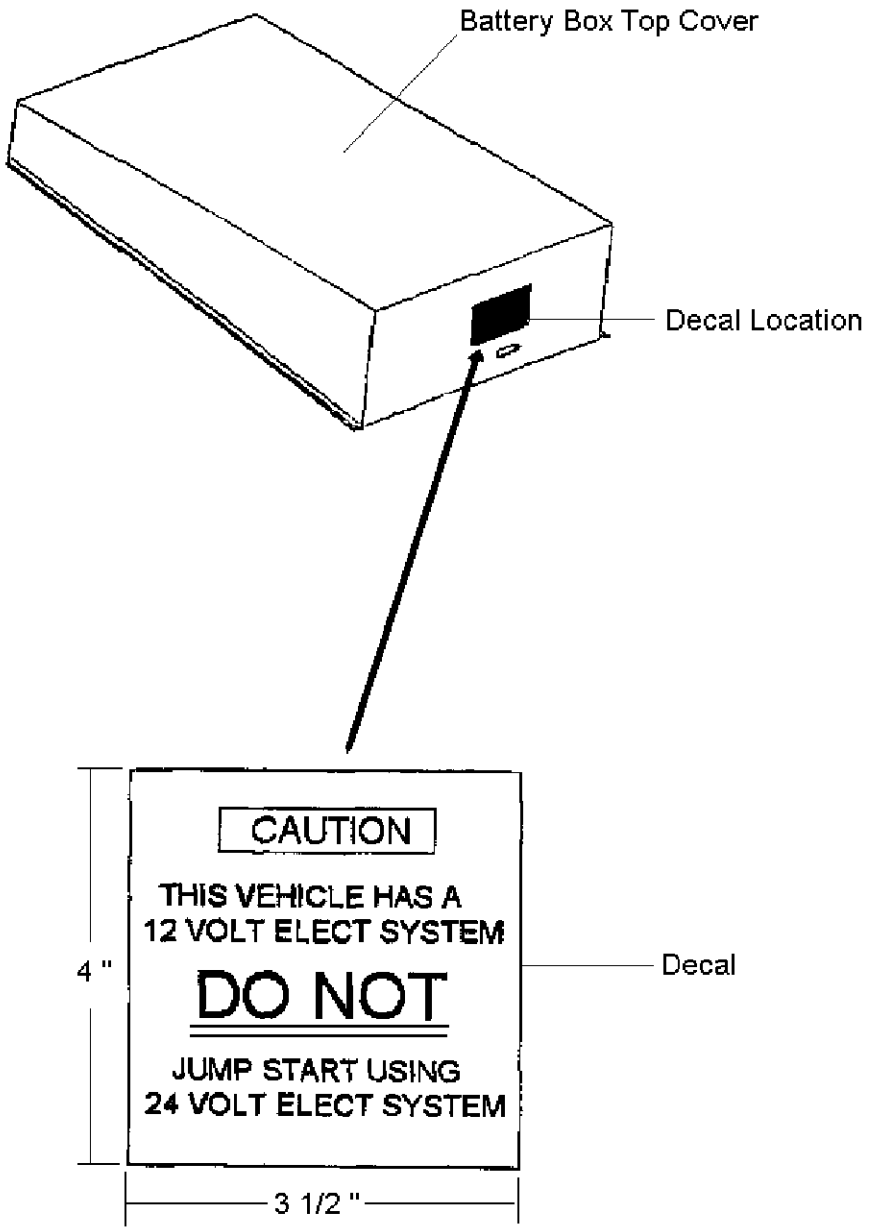
hardware.								
4. GUTTER BROOM ASSEMBLY a. Gutter broom down pressure, broom angle, shoulder plate and broom cylinder functions as intended. Broom assembly is securely mounted in its proper position with no loose, missing, or damage mounting hardware. b. Broom assembly spring adjustment is correct and functions as intended. c. Hydraulic motor, hydraulic control valve, hydraulic lines and hoses functions as intended without leakage. d. Gutter broom assembly contains no missing, loose, or damaged mounting hardware.								
5. HOPPER ASSEMBLY HYDRAULIC SYSTEM a. Hydraulic tank and tank filler cap functions as intended without leakage, loose or missing mounting hardware. b. Hydraulic filter(s) replaced 100 per cent. c. Hydraulic pump functions as intended without overheating, load noises, or poor performance. d. Hydraulic control valves operate as intended with out leakage or binding. e. Hydraulic cylinders, hoses and lines functions as intended without leakage.								
6. WATER SYSTEM a. Water tank is serviceable and securely mounted in place with no missing, loose, or damage mounting hardware. b. Suction filtration strainers function as intended. Filters replaced 100 per cent. c. Low pressure pump functions as intended. d. Water pump electrical connections, switches, and relays operates as intended with no loose or missing parts. e. Water manifold functions as								

intended without leakage, damage or corrosion. f. Electrical operate valves and their control switches functions as intended. g. Low water lights and pressure switches functions as intended. h. Water hoses and lines, water nozzles are serviceable and contains no missing or loose mounting hardware.								
7. FUEL SYSTEM a. Fuel tank is securely mounted in its proper position with no leakage, loose, or missing mounting hardware. b. Auxiliary engine and truck fuel supply and return lines and hose are serviceable without leakage, loose, missing or broken mounting hardware c. Fuel tank sending unit and gauge functions as intended.								
8. CONTROL SYSTEM The following items shall be serviceable and performs their intended functions as intended:								
a. Washer warning and low pressure lights.								
b. All switches (both Keyed and toggled) and push buttons,								
c. Engine gauges and sending units.								
d. Throttle cable/leaf pressure bleeder cable.								
e. Fuse panel								
f. Electrical wiring harness								
g. Battery box, NATO slaving receptacle, and battery cables.								
DUEL STEERING a. Steering wheels are serviceable. b. Left and right steering brackets, mounting hardware, covers, plates, and housings are mounted in their proper place without loose, missing or damage parts. c. Steering shafts, yoke assemblies, steering shaft gears, set collars, and support brackets are securely mounted in their proper position with no loose, missing or damage parts.								

d. Dual steering functions equally as well from both sides of vehicle. e. Turn and hazard light switch functions as intended.								
10. AUXILIARY HAND HOSE ASSEMBLY a. Hand hose assembly hose, hose clamps and pick-up tube are functional without loose, missing or broken parts. b. Hand hose mounting brackets, straps, boom assembly, and hose/inspection door functions as intended, hose/inspection door seal are functional without leakage, loose or missing parts.								
11. MAGNET ASSEMBLY a. Assembly is free of loose, missing or broken parts. Assembly is free of rust or corrosion. b. Magnet, magnet electrical and hydraulic controls performs as intended without loose, missing or damage parts.								
POWER UNIT JOHN DEERE 4239L								
!. POWER UNIT, ENGINE a. Engine operates without unusual mechanical noises, vibrations, excessive exhaust smoke, leakage of exhaust gases and fluids, low oil pressure or overheating. b. Engine meets requirements of the Engine System Operation and Test procedures in TM 3825-24/9.								
2. FUEL SYSTEM a. Fuel supply pump, air cleaner indicator, fuel lines and hoses, air cleaner assembly, and air intake hose is serviceable and operates as intended. b. Air, oil, and fuel filters replaced 100 per cent.□								
3. COOLING SYSTEM a. Hoses, hose clamps, water pump, fan and fan shroud operates as intended and is free of leakage, loose and missing parts.								

4. ELECTRICAL SYSTEM a. Wiring harness to include battery cables functions as intended with no loose, missing or corroded parts. b. Engine oil pressure and water gauges functions as intended. c. Alternator and starting motor functions as intended.								

CAUTION DECAL AND DECAL LOCATION



Dimensions are expressed in inches

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ____ TM ____ OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Self-Propelled Vacuum Cleaner		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A001	Request For Deviation	Configuration Management

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80640B	SOW 3.4.2	MCLBA (825)

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	A	ASREQ	SEE BLK 16

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

16. REMARKS

Blk 4 - Contractor format using .doc or .pdf software applications is authorized.

Blks 10 & 12 - RFDs shall be submitted to obtain authorization to deliver nonconforming material which does not meet prescribed configuration documentation.

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G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
Cobb Pitts	2-9-00		2-16-00

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP _____ TM _____ OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
Self-Propelled Vacuum Cleaner		

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE
A002	Request For Waiver	Configuration Management

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE
DI-CMAN-80641B	SOW 3.4.2	MCLBA (825)

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	A	ASREQ	SEE BLK 16
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